

AMERICAN RAILROAD JOURNAL, AND ADVOCATE OF INTERNAL IMPROVEMENTS.

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D. K. MINOR, EDITOR.]

SATURDAY, DECEMBER 6, 1834.

[VOLUME III.—No. 48.]

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RAILROAD CONVENTION.—After the Journal was on the press, and a part of it worked off, we received the annexed circular calling a convention at Bath, Steuben county, for the purpose of deliberating upon and adopting measures in relation to the NEW-YORK AND ERIE RAILROAD. We have only time and space now to say, that we shall refer more particularly to it in our next—and, in the mean time, use our best exertions to promote the object in view.

At a meeting of the Inhabitants of the county of Steuben, friendly to the proposed Railroad through the Southern tier of Counties, held at the Court-house in Bath, on Tuesday, the 25th of November, 1834, Henry A. Townsend was appointed Chairman, and John Cooper, Jr., Secretary.

On motion, resolved,—That the different Counties of the State of New-York, friendly to the construction of the New-York and Erie Railroad, be invited to meet in convention, at the Court-house, in the village of Bath, on Wednesday, the 17th day of December, 1834, at 10 o'clock in the forenoon, for the purpose of adopting suitable measures for promoting this great and important work.

Resolved,—That a Committee of three be appointed to correspond with the friends of the Railroad throughout the State, consisting of Wm. S. Hubbell, Wm. W. McCay, and Henry W. Rogers, Esquires.

On motion, the following persons were selected as delegates, to represent this county in said convention :

Wm. W. McCay, Wm. Kernan, Henry A. Townsend, Ira C. Clark, John Cooper, Jr., Joseph Loghry, Ralph Babcock, Wm. Woods, Wm. Goff, Wm. S. Hubbell, Ira Davenport, John R. Gansevoort, John E. Evans, Paul C. Cook, Levi Davis, Henry S. Williams, John M. Burney, Wm. Steele, Henry W. Rogers, John Magee, Lemuel B. Searls, John Knox, George C. Edwards, Henry Switzer, Lazarus Hammond, Grattan H. Wheeler, James Manderson.

The Members of the Board of Supervisors of said County of Steuben were also added to the above delegation.

Resolved,—That the proceedings of this meeting be signed by the Chairman and Secretary, and published in the papers of the county.

HENRY A. TOWNSEND, Chairman.

JOHN COOPER, Jr. Secretary.

NEW-YORK AND ERIE RAILROAD.—By the annexed extract from the proceedings of the Board of Assistants, on Monday last, it will be seen that our citizens begin to move in favor of this important work. It could hardly be otherwise; and it would be a libel upon the intelligence and liberality of the business men of this city to suppose that they would withhold, from

such a work, a favorable expression of opinion—or all proper aid, when the proper time shall arrive for its construction. That time, as we believe, has arrived. Additional channels of communication are needed; and, as increased speed is required, as well as an extension of the period for the transaction of business, to keep pace with neighboring States, it follows, almost of course, that this Railroad should be prosecuted with all possible expedition.

Whereas the immense augmentation which has been experienced in the extent, wealth and prosperity of the city of New York, since the completion of the Canals of this State, signally demonstrates the value and necessity of artificial channels of commercial communication connecting the metropolis with the populous and fertile regions of the interior :

And whereas several rival works leading into the State of Ohio, from ports on the Atlantic sea-board south of this city, are now constructing and are rapidly advancing to completion, under the direction of various companies incorporated and powerfully patronised by the States of Pennsylvania, Maryland, and Virginia, seeking to divert from the city of New York the extensive and lucrative commerce which it has heretofore enjoyed with the rich and rapidly increasing States and Territories north of the Ohio River, avowedly relying for success upon the greater severity of climate and more northerly latitude of the State of New York closing the navigation of its canals during a large portion of the year :

And whereas it has become vitally important to the commerce of this city to obviate the difficulties and disadvantages to which it is thus subjected, which object can only be attained by opening additional channels of trade and intercourse by means of Railroads leading directly from the Bay of New York to the navigable Lakes and Rivers of the West, and which shall be available for commercial purposes at all seasons of the year :

And whereas the Legislature at its last session directed the route of a Railroad to be surveyed under the direction of the Executive, through the Southern Counties of the State from the Hudson River, near the city of New York, to Lake Erie, for the purpose of ascertaining whether the public interest would be promoted by a subscription on the part of the State, to a portion of the capital stock of the New York and Erie Railroad Company, incorporated in the year 1832, for the purpose of constructing such road, by which subscription the commonwealth at large might participate in the burthens and benefits of that undertaking,—or in what other mode the general objects sought to be accomplished by that act of incorporation might properly be encouraged by the public authorities :

And whereas by means of such survey it has been satisfactorily ascertained, that if the State shall co-operate and participate in the enterprise, the whole of the road can be completed within four years from the first day of May, 1835, and a communication thereby provided by which passengers and merchandise may be cheaply, rapidly and regularly transported, at all seasons of the year, in less than forty hours, from the city of New York to the southern shore of Lake Erie, connecting the line of the route with the Alleghany River, and thus communicating directly with the valley of the Ohio :

And whereas the inhabitants of this city are deeply interested in the prosecution and speedy accomplishment of this most important undertaking, tending, as it inevitably must, to attract and secure forever to this port the vast and expanding trade of the most fertile, populous and valuable portion of the continent, thereby augmenting the commerce, prosperity and wealth of this emporium to an incalculable extent :

Therefore Resolved, (if the Board of Aldermen concur herewith,) that it be referred to a joint Committee of three members from each Board, to report resolutions signifying the sense which the Common Council of this city entertain of the necessity, importance and value of the proposed work, and to inquire and report what measures, if any, the city may properly adopt to promote and secure its speedy execution.

We insert the following communication with much pleasure, as it refers to a subject which has been frequently treated of in this Journal. It will, we hope, elicit further information from American engineers, and we again call upon them to furnish us with the result of their reflections and investigations. The request of the writer shall be attended to, and we trust he will favor us with further communications.

On Railroad Undulations. By JOHN THOMSON, Civil Engineer, Nashville, Tennessee. To the Editor of the American Railroad Journal.

Experiments have been made on the Liverpool and Manchester Railroad, by Mr. Badnall and others, for the purpose of showing the advantages of undulations on railroads. These experiments, and the results attempted to be deduced from them, are well known to engineers. The principles which Mr. Badnall attempts to deduce from these experiments have been considered visionary by many practical and scientific men. The question has attracted greater attention in England than in this country. The system has found its supporters and its opponents, who not unfrequently have employed ridicule and sarcasm instead of cool and rational argument.

It must be confessed, that the experiments above alluded to are not satisfactory. They seem to prove too much; as we ought to conclude from many of those experiments, that a car passing over an undulating road would acquire an additional velocity at every undulation, and would thus be moved by a kind of accelerating force as long as the undulations continued. The results of the experiments also are not sufficiently uniform,

and indicate something defective in the mode of making the experiments. We may add also, that Mr. Badnall has not been successful in his theoretical deductions. We may quote for example the following:

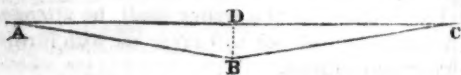
"Let P be the pressure or weight of a given body resting on a horizontal plane, and let S be the quantity taken off that pressure, (or let it be the diminution of pressure,) when the body is placed on an inclined plane, and let a be the angle of inclination with the horizon; we then have in all cases

$S : P :: \text{height} : \text{base}.$
But $\text{height} : \text{base} :: \tan a : 1$
therefore $S : P :: \tan a : 1$
consequently $S = P \tan a.$ "

That this conclusion is erroneous may be shown by supposing a body of a given weight to be supported on an inclination of 45 deg. In that case we have $\tan a = 1$, and consequently the above equation becomes $S = P$, that is, the diminution of pressure is equal to the whole weight of the body, and therefore the body rests on the plane without pressure upon it, which is manifestly an error.

But notwithstanding, there is enough in the experiments of Mr. Badnall, and in the nature of the subject generally, to invite the attention of engineers. That a body may be passed from one point to another, in the same horizontal plane, along a descending and an ascending path, in a shorter time than another body, moving in a straight horizontal line, and impelled at first by the same horizontal force, is true in theory, and no mathematician would controvert a principle so well known in mechanics. But whether the same will hold in practice, where the resistance of friction and of the atmosphere, &c. are to be taken into consideration, remains a question.

In further remarking on this subject, we shall adopt particular examples, which will perhaps answer the purpose of the present investigation better than a more general method.



Let AB and BC be two inclined planes, meeting at the point B , and suppose the length of each to be 954 feet, the height BD 9 feet, the descent will therefore be 1 in 106, or 50 feet in the mile nearly. The distances along the inclined planes CB and BA , and along the straight line CA , will be nearly the same, and equal to 1908 feet. Put g = force of gravity, f = any other accelerating force, t = time, v = velocity, and s = space.

Suppose a body at C to pass from C to B by the force of gravity, without resistance of any kind from friction, &c. the time of descent will be $t = \sqrt{\frac{2s}{g}} = 79.2$ seconds,

and the time in passing along the two planes CB , BA , will consequently be 158.4 seconds, supposing the angle at B slightly rounded. It is evident that the body at C may be removed in this way from the point C to A , without the application of any other force than that of gravity. Let us now suppose the body to be removed from C to A along the straight line CA . To do this, either an impulsive or an accelerating force will be necessary, the force of gravity, of course, not acting in this direction. To find

the amount of accelerating force that will move the body from C to A along the straight line, in the same time that it passes along

the inclined planes, we have $f = \frac{2s}{t^2} = .152.$

If we assume the weight to be removed 100 tons, the above force, compared with the force of gravity, will be expressed by 1057 pounds. This will be the accelerating force necessary to overcome the vis inertiae of the above weight, so as to move it in a straight line from C to A , in the same time that it would pass by the force of gravity along the inclined planes. If we assume the resistance of friction of rail cars equal to the 240th part of the weight, the friction from a weight of 100 tons will be 933 lbs. Hence it is evident, that to overcome for the above space and time the vis inertiae of a train of cars weighing in all 100 tons, it will require a greater force than that necessary to overcome the resistance of friction.

Let us now assume a case in practice: suppose two trains of cars to pass by locomotive power from C to A , one train along the inclined planes, the other along the horizontal plane ADC . Here a variety of accelerating and resisting forces are to be taken into consideration, and compared together, as they operate on each roadway. The resistance of friction may be considered the same on the level and on the inclined planes, since the pressure on an inclined plane, and consequently the friction, is as the cosine of inclination; and as the angle of inclination in the present case is very small, its cosine approaches very nearly to unity. The resistance of the atmosphere may also be considered nearly equal in both cases; at least, in practice, the difference is probably of little consequence. In regard to the resistance of inertia, the inclined plane has the advantage of the horizontal; as, on the former, it may be considered as overcome by the force of gravity. There is one resisting force operating on the inclined planes, which does not exist on the horizontal. It results from a change of direction from CB to BA ; but as we have supposed the angle at B to be rounded, the only resistance will arise from an increase of pressure, and consequently of friction, in passing over the curve at B . Let us suppose the whole line CB and BA to be a circular curve, DB and DC the co-ordinates which are given. The radius of curvature will then be 50566 feet. And supposing an average velocity of 20 miles per hour, we have $f = \frac{v^2}{R} = .017.$ If the weight

moved be 100 tons, the above force, compared with the force of gravity, will be expressed by 118 lbs. This will be so much additional weight in passing the curve, and consequently the additional resistance of friction will be about one half pound. It is evident, therefore, that this resistance may also be neglected in comparing the advantages and disadvantages of the inclined and horizontal planes.

Let us now suppose the train of cars that move along the inclined planes to be propelled by a force of steam just sufficient to overcome the resistance of friction, atmosphere, &c. In that case we may suppose the whole mass to move (as in theory) without resistance, and by the force of gravity

alone. The train would therefore move from C to A in 158 seconds, as above shown. But the same force of steam would not be sufficient to move the train along the horizontal plane, as the resistance of inertia for a given space and time was shown to be greater than that of friction. A slow progressive motion might be given to the cars by a small increase of the force of steam, but it would require more than double the force necessary to overcome friction, in order to move the train along CD and DA , in the same time with the train moving along CB and BA . It should also be observed, that the velocity acquired in passing along CD and DA in 158 seconds, is nearly 16½ miles per hour, when the velocity of a locomotive may generally be considered as nearly uniform. It is evident, therefore, that for the distance and inclination here supposed, and for initial movements, one concave undulation, (if it may be so called,) has the advantage of a straight horizontal surface.



Again, let us suppose a case in which a number of undulations may be taken into consideration. Let two bodies be supposed to move with equal and uniform velocities along the horizontal plane from E to C , one then passing along the inclined planes CB , BA , AK , the other passing along the horizontal line CG , the bodies moving without resistance from friction, &c. Assume the length and inclination of the planes the same as before, and let the initial uniform velocity from E to C be taken for example, $v = 6$, or 4 miles per hour nearly. Then having f and s given, to find the time of passing down the inclined plane CB , we have $\frac{1}{2}ft^2 + vt = s$, from which $t = 61.9$ seconds.

Hence the time in which the body passes along the two inclined planes CB and BA , will be 123.8 seconds. But the body moving along the horizontal plane CA , with the uniform velocity above given, will pass from C to A in 318 seconds, almost three times greater than the time of passage on the inclined planes. Now suppose the angle at A to be rounded, the body which moves along the inclined planes will pass the point A with the same original velocity with which it first started at E , because nothing has occurred to destroy that velocity. Hence it follows, that the body will pass the second equal concave undulation AK in the same time it passed the first, and so on for succeeding undulations. It appears also that the mean velocity along the inclined planes, of the length and height already given, is nearly three times greater than that along the horizontal plane, the original impulsive force having acted equally on both bodies. It follows also that the mean velocity along the inclined planes, for a given number of undulations, is a constant quantity, and not an accelerated velocity. It is evident, also, that if the inclined planes had been reversed, that is, if CB had been an ascending plane from C , instead of a descending one, the motion of the body, moving along the inclined planes, would have been retarded in the same ratio that we have seen it accelerated; and hence the advantage of increased velocity is only gained by having the inclined planes below the general horizontal plane.

The above being true in theory, the question now presents itself—will the same principles hold in practice? It would seem, on

a general view of the subject, that the action of the impelling and resisting forces, as they occur in practice, could scarcely be so unequal as entirely to destroy the advantages of inclined planes of moderate length and height. If models may be considered as giving any thing like correct ideas of practical operations, (and it must be confessed they are not always to be relied on,) any one may satisfy himself of the general truth of increased velocity, as above stated, by simply propelling two small rollers, of equal dimensions, with the same impulsive force, one to pass along a horizontal plane, the other along an undulating surface, which may easily be prepared for the purpose.

It is not at all inconsistent with the principles of Dynamics, but in perfect accordance with them, that two bodies may be impelled horizontally with the same motive force, and yet one pass between two given points, in the same horizontal plane, in less time than the other body moving in a straight line. It is true, that a straight line between two points given in space is the line of quickest passage, when a single given force acts alone. But in the present question, two principal forces are always supposed to act—the motive force and the force of gravity.

In practice, the action of the force of steam is not always regular. When the piston has acquired a very rapid motion, the actual pressure of the steam in the cylinder becomes less, not so much from a difference of pressure in the cylinder and boiler, as from the fact, that steam is not generated with sufficient rapidity to keep up the usual pressure in the boiler. Hence it is, that when a locomotive passes down an inclined plane, the actual motive force of the steam will be lessened, when a very rapid velocity has been acquired near the foot of the plane. But it is altogether probable that, on planes varying from 800 to 1200 feet in length, and of an inclination of about 50 ft. in the mile, the average force of steam would be abundantly sufficient to pass a loaded train over a concave undulation, in less time than it would pass the same distance in a horizontal line, if we suppose the force of steam sufficient to give the train a velocity of 10 or 12 miles per hour on a level road.

But, in all cases in practice, care should be taken to adjust the length and height of undulations, so that the velocity acquired at the foot of the planes should not be greater than what might be deemed safer under all circumstances.

Upon the whole, gentle undulations, where the ground will permit, seem to be well calculated for steam or horse power. Much may be saved in the expense of grading, and water will always be prevented from lodging on the roadway.

In locating the planes for undulations, care should be taken so to adjust them, that a car, in passing over them, may first descend, and then ascend to nearly its former level. The nature of the ground in all places frequently permits this; for instance, in crossing a ravine, or small creek bottom, where the length of the planes may be from 100 to 300 yards. When it is necessary to extend the length of the planes to half a mile, or more, it is evident that the ascending and descending grades should be so adjusted, that the force of steam alone, and not momentum, may be depended upon, for passing the load up the ascending plane.

Fifth Annual Report of the Superintendent of Graduation, Masonry, and Construction of the Baltimore and Ohio Rail Road.

Office of the Superintendent of the Graduation, Masonry and Construction of the Baltimore and Ohio Rail Road. 1st Oct. 1834.

To PHILIP E. THOMAS, President, &c.

SIR—As a full and detailed report in relation to the work placed under my superintendence will necessarily be made, as soon as it shall have been completed, and as the entire road to Harper's ferry is now almost finished, as well as the graduation and masonry of that part of the Washington road that has been authorised to be put under contract, I consider it only necessary in this report to give you a general view of the condition of the work at the present time, and to state the periods when the same will be finished.

The entire graduation and masonry of the Baltimore and Ohio Rail Road, as far as to Harper's ferry, is completed, except that it may yet be necessary to remove a few points of projecting rocks on the north side of the road, between the Point of Rocks and the ferry.

The materials for the construction of the rail tracks on this road have been provided, and the greater portion of them distributed along the line of the work.

The laying of the rails has been commenced at different points, and will be completed by the end of next month. Materials of the best quality are in a course of preparation for the horse path, and will be applied as fast as the laying of the rails advances, so that the whole road will be ready for travel and traffic within a few days after the laying of the rails shall have been finished.

The graduation of the Washington Rail Road is completed as far as to the district line, with the exception of the deep cuts. These, it is confidently expected, will also be finished by the first day of January next.

The masonry on this road is all completed except the "Thomas Viaduct," over the Patapsco, and this stupendous structure, it is not doubted, will be finished in due time to receive the rails, with the other parts of the road.

The masonry on this road, between its deflection from the Baltimore and Ohio Rail Road and the line of the District of Columbia, will be about 39,000 perches. It has been executed in the most substantial and permanent manner; and so far it has shown no indication of the least imperfection, either as regards its foundations, materials or construction. Indeed, I believe that it may safely be asserted, that there is not any better executed stone work, either as respects durability or appropriateness to the purpose intended, in this country.

The requisite materials for laying down the rails, on the entire line of this road, are nearly all distributed along the road, except the iron rails and their necessary fixtures, only a part of which have been received.

The whole have, however, been ordered, and we have assurances that they will be received by the time they may be wanted. The actual laying of the rails, at several points along the Washington road, has been commenced under three different contractors, and the whole will be completed by the 1st day of July next, or earlier, should the iron arrive in time.

If the Board conclude within the present month, to authorise the graduation of that part of this road lying within the District of Columbia, it may also be completed by the middle of next summer, so as to have the rails laid there and the whole line in operation for travel and transportation within less than one year from this date.

Respectfully submitted,

CASPAR W. WEVER, Superintendent, &c.

Office of the Treasurer of the Baltimore and Ohio Railroad Co. 1st October, 1834.

PHILIP E. THOMAS, Esq. President.

SIR: The following statement in relation to

the fiscal operations of the Baltimore and Ohio Railroad Company during the past year is respectfully submitted. Your obedient servant,

W. H. MURRAY, Treas'r, &c.

The Baltimore and Ohio Railroad Company, in account with William H. Murray, Treasury.

To Cash paid Chesapeake and Ohio Canal Company, for graduation of that portion of the 6th Division, between the Point of Rocks and Harper's Ferry, undertaken by that Company,	\$155,166.67
Cash paid Graduation and Masonry on that part of the Road not undertaken by the Chesapeake and Ohio Canal Company,	106,537.82
Cash paid construction of Depots, Stables, Turnouts, Sidelings, and Engine house,	11,676.19
Cash paid materials for Rail Tracks,	5,163.17
Cash paid construction of Carriages, Wagons, &c.	69,683.60
Cash paid construction of Locomotive Engines,	16,426.99
Cash paid Engineer department,	5,492.51
Cash paid damages and right of way,	8,864.00
Cash paid for Patent Rights,	2,500.00
Cash paid Law Expenses,	2,002.75
Cash paid Office Expenses, Salaries, and Contingencies,	5,540.70
Cash paid Installments on the Washington Railroad Stock,	375,520.00
Cash advanced to the Washington Railroad,	28,406.67
Cash paid Union Bank, loan refunded,	200,000.00
Cash paid Mechanics Bank, loan refunded,	75,000.00
Cash paid Interest on State and City Stocks, and to Banks,	32,424.87
Cash paid expenses of Transportation, per return of the Superintendent,	\$83,416.74
Cash paid Horse Feed on hand, provided for the next winter's consumption,	6,923.04
	95,344.78
Cash paid repairs of Railroad and Machinery	38,845.67
Materials on hand for future use,	990.50
	39,836.17
Unexpended balances in the hands of disbursing officers,	33,130.57
	\$1,268,717.46
By Balance on hand at the credit of the Company, as per last Annual Report,	\$54,820.97
Cash received for Installments on 29,895 Shares of Stock, at \$5.00,	149,475.00
Cash received, being the final payment upon 5,000 shares, owned by the State of Maryland,	125,000.00
Cash received, being the final payment upon 5,000 shares owned by the City of Baltimore, say proceeds of sale of \$175,000, five per cent. Stock, issued by the City,	175,756.08
Cash received from sale of forfeited Stock,	940.00
Cash received for revenue from 30th September, 1833, to 30th September, 1834, per return of Superintendent,	205,436.58
Arreages of revenue not collected last year,	17,537.34
Cash received for Bonds issued to Union Bank of Maryland, applicable to the payment of Installments on Stock in the Washington Railroad,	500,000.00
Balance,	39,751.49
	\$1,268,717.46

The Company have acquired since the last annual report, in addition to the real estate which it then owed, the following pieces of property, viz.:

- 1st. Three lots in the town of Berlin, situated half way between the Point of Rocks and Harper's Ferry. This purchase will afford a convenient depot immediately where the railway is crossed by a county road, which opens a communication with Loudoun county, in Virginia, and the Middletown Valley, in Maryland.
- 2d. That piece or parcel of land lying between the Baltimore and Ohio and the Washington Railroads, at the point of their separation near the Viaduct over the Patapsco.
- 3d. A lot of ground adjoining the land heretofore conveyed to the Company by James Carroll, for the Mount Clare Depot. This lot is situated north of that depot, and affords a convenient communication with Pratt street.

W. H. MURRAY, Treas'r, &c.

The Baltimore and Ohio Railroad Company, Washington Branch, in account with Wm. H. Murray, Treasurer.

Cr.

By Cash Received on 10,000 Shares of Stock, being \$50 per Share,	\$500,000.00
Cash received from the sale of Stock, received from the State of Maryland,	350,000.00
Cash received from the Mechanics' Bank of Baltimore, as a loan,	75,000.00
Cash received from the Baltimore and Ohio Railroad Company,	28,406.67
	\$953,406.67

Dr.

To Cash paid Engineer department,	\$27,812.35
Cash paid for Right of Way,	71,651.23
Cash paid for Graduation and Masonry,	698,950.61
Cash paid Department of Construction, being for materials for Rail track,	56,096.54
Cash paid Department of Machinery, including purchase of patents,	3,437.50
Cash paid Interest on Loans,	13,658.29
Cash paid Law expenses,	675.00
Cash paid Office expenses, Salaries, and Contingencies,	4,102.51
Unexpended balances in the hands of disbursing officers,	44,591.68
Balance on hand this day,	32,430.96
	\$953,406.67

W. H. MURRAY, Treas'r.

Harper's Ferry and Baltimore.—The portion of the Ohio Railroad between the Point of Rocks and Harper's Ferry, a distance of twelve miles, is on the point of completion. It will be opened for travel and transportation on Monday, 1st Dec., when there will be a perfect railroad communication from Baltimore to Harper's Ferry, of eighty-two miles in length. The extension of the improvement to that important point will materially augment the business of the Road, and benefit, in a corresponding degree, the trade of our country.—[Balt. Am.]

Railroad Accident.—On the afternoon of Tuesday last, one of the cars on the Newark Railroad, was driven, by the carelessness of the driver, into the aperture occasioned by opening the draw of the bridge over the Passaic, for a vessel to pass, with a concussion that injured many of the passengers, about twenty in number, severely. Fortu-

nately, the frame work of the bridge sustained the car, and probably saved the lives of many, as the distance the horses were precipitated was about twenty feet or more. The escape is almost miraculous, and there should be some regulation as to opening the draw at the bridge, as the declivity is sufficient to very much increase the speed or velocity of the car.

Railroad Accident.—Yesterday morning between 9 and 10 o'clock, as the train of cars from Westborough were passing through Natick, a short distance above the centre of the town, the engine came in contact with the chaise of Mr. David Rice of that town, who was crossing the track, and not seen till the moment. The horse was killed instantly, the chaise was dashed in pieces, and Mr. Rice seriously injured on his head, though it is thought he may recover. The passengers united in freeing the engineer from the imputation of blame.

23d CONGRESS—Second Session.

Monday, December 1, 1834.

This day commenced, at the Capitol, in the City of Washington, the Second Session of the Twenty Third Congress.

PRESIDENT'S MESSAGE.

Fellow Citizens of the Senate, and House of Representatives:

In performing my duty at the opening of your present session, it gives me pleasure to congratulate you again upon the prosperous condition of our beloved country. Divine Providence has favored us with general health, with rich rewards in the fields of agriculture and in every branch of labor, and with peace to cultivate and extend the various resources which employ the virtue and enterprise of our citizens. Let us trust that in surveying a scene so flattering to our free institutions, our joint deliberations to preserve them may be crowned with success.

Our foreign relations continue, with but few exceptions, to maintain the favorable aspect which they bore in my last annual message, and promise to extend those advantages which the principles that regulate our intercourse with other nations are so well calculated to secure.

The question of the northeastern boundary is still pending with Great Britain, and the proposition made in accordance with the resolution of the Senate, for the establishment of a line according to the treaty of 1783, has not been accepted by that government.—Believing that every disposition is felt on both sides to adjust this perplexing question to the satisfaction of all the parties interested in it, the hope is yet indulged that it may be effected on the basis of that proposition.

With the governments of Austria, Russia, Prussia, Holland, Sweden and Denmark, the best understanding exists. Commerce with all, is fostered and protected by reciprocal good will, under the sanction of liberal conventional or legal provisions.

In the midst of her internal difficulties, the Queen of Spain has ratified the Convention for the payment of the claims of our citizens arising since 1819. It is in the course of execution on her part, and a copy of it is now laid before you for such legislation as may be found necessary to enable those interested to derive the benefits of it.

Yielding to the force of circumstances, and to the wise counsels of time and experience, that power has finally resolved no longer to occupy the unnatural position in which she stood to the new governments established in this hemisphere. I have the great satisfaction of stating to you that in preparing the way for the restoration of harmony between those who have sprung from the same ancestors, who are allied by common interests, profess the same religion, and speak the same language, the U. States have been actively instrumental. Our efforts to effect this good work, will be persevered in while they are deemed useful to the parties, and our entire disinterestedness continues to be felt and understood. The act of Congress to counteract the discriminating duties, levied to the prejudice of our navigation, in Cuba and Porto Rico, has been transmitted to the Minister of the United States, to be communicated to the Government of the Queen. No intelligence of its receipt has yet reached the Department of State. If the present condition of the country permits the Government to make a careful and enlarged examination of these important portions of its dominions, no doubt is entertained that their future intercourse with the United States will be placed upon a more just and liberal basis.

The Florida archives have not yet been selected and delivered. Recent orders have been sent to the

agent of the United States at Havana, to return with all that he can obtain, so that they may be in Washington before the session of the Supreme Court, to be used in the legal questions there pending, to which the Government is a party.

Internal tranquillity is happily restored to Portugal. The distracted state of the country rendered unavoidable the postponement of a final payment of the just claims of our citizens. Our diplomatic relations will be soon resumed, and the long subsisting friendship with that power affords the strongest guarantee that the balance due will receive prompt attention.

The first instalment due under the convention of indemnity with the King of the Two Sicilies, has been duly received, and an offer been made to extinguish the whole by a prompt payment—an offer I did not consider myself authorized to accept, as the indemnification provided is the exclusive property of individual citizens of the United States. The original adjustment of our claims, and the anxiety displayed to fulfil at once the stipulations made for the payment of them, are highly honorable to the government of the Two Sicilies. When it is recollected that they were the result of the injustice of an intrusive power, temporarily dominant in its territory, a repugnance to acknowledge and to pay which would have been neither unnatural nor unexpected, the circumstances cannot fail to exalt its character for justice and good faith in the eyes of all nations.

The treaty of Amity and Commerce between the United States and Belgium, brought to your notice in my last annual message, as sanctioned by the Senate, but the ratification of which had not been exchanged, owing to a delay in its reception at Brussels, and a subsequent absence of the Belgian Minister of Foreign Affairs, has been, after mature deliberation, finally disavowed by that government as inconsistent with the powers and instructions given to the Minister who negotiated it. This disavowal was entirely unexpected, as the liberal principles embodied in the convention, and which from the ground-work of the objections to it, were perfectly satisfactory to the Belgian representatives, and were supposed to be not only within the powers granted, but especially conformable to the instructions given to him. An offer, not yet accepted, has been made by Belgium to renew negotiations for a treaty less liberal in its provisions, on questions of general maritime law.

Our newly established relations with the Sublime Porte, promise to be useful to our commerce, and satisfactory in every respect to this government. Our intercourse with the Barbary Powers continues without important change, except that the present political state of Algiers has induced me to terminate the residence there of a salaried consul, and to substitute an ordinary consulate, to remain so long as the place continues in the possession of France. Our first treaty with one of these powers—the Emperor of Morocco—was formed in 1786, and was limited to fifty years. That period has almost expired. I shall take measures to renew it with the greater satisfaction, as its stipulations are just and liberal, and have been, with mutual fidelity and reciprocal advantage, scrupulously fulfilled.

Intestine dissensions have too frequently occurred to mar the prosperity, interrupt the commerce, and distract the governments of most of the nations of this hemisphere, which have separated themselves from Spain. When a firm and permanent understanding with the mother country shall have produced a formal acknowledgment of their independence, and the idea of danger from that quarter can be no longer entertained, the friends of freedom expect that those countries, so favored by nature, will be distinguished for their love of justice and their devotion to those peaceful arts, the assiduous cultivation of which confers honor upon nations and gives value to human life. In the mean time I confidently hope, that the apprehensions entertained, that some of the people of these luxuriant regions may be tempted, in a moment of unworthy distrust of their own capacity for the enjoyment of liberty, to commit the too common error of purchasing present repose by bestowing on some favorite leaders the fatal gift of irresponsible power—will not be realized. With all these Governments, and with that of Brazil, no unexpected changes in our relations have occurred during the present year. Frequent causes of just complaint have arisen upon the part of the citizens of the United States—sometimes from the irregular action of the constituted subordinate authorities of the maritime regions, and sometimes from the leaders or partisans of those in arms against the established government. In all cases, representations have been, or will be made, and as soon as their political affairs

are in a settled position, it is expected that our friendly remonstrances will be followed by adequate redress.

The Government of Mexico made known in December last, the appointment of Commissioners and a Surveyor, on its part, to run, in conjunction with ours, the boundary line between its territories and the United States, and excused the delay for the reasons anticipated—the prevalence of civil war.—The Commissioners and Surveyors not having met within the time stipulated by the treaty, a new arrangement became necessary, and our Chargé d'Affaires was instructed, in January last, to negotiate, in Mexico, an article additional to the pre-existing treaty. This instruction was acknowledged, and no difficulty was apprehended in the accomplishment of that object. By information just received, that additional article to the treaty will be obtained, and transmitted to this country, as soon as it can receive the ratification of the Mexican Congress.

The re-union of the three States of New Granada, Venezuela, and Ecuador, forming the Republic of Colombia, seems every day to become more improbable. The Commissioners of the two first are understood to be now negotiating a just division of the obligations contracted by them when united under one government. The civil war in Ecuador, it is believed, has prevented even the appointment of a commissioner on its part.

I propose, at an early day, to submit in the proper form, the appointment of a diplomatic agent to Venezuela. The importance of the commerce of that country to the United States, and the large claims of our citizens upon the government, arising before, and since the division of Colombia, rendering it, in my judgment, improper longer to delay this step.

Our representatives to Central America, Peru, and Brazil, are either at, or on their way to, their respective posts.

From the Argentine Republic from which a Minister was expected to this Government, nothing further has been heard. Occasion has been taken, on the departure of a new Consul to Buenos Ayres, to remind that Government that its long delayed Minister, whose appointment had been made known to us, had not arrived.

It becomes my unpleasant duty to inform you that this pacific and highly gratifying picture of our foreign relations, does not include those with France at this time. It is not possible that any Government and people could be more sincerely desirous of conciliating a just and friendly intercourse with a friendly nation, than are those of the United States with their ancient ally and friend. This disposition is founded as well on the most grateful and honorable recollections associated with our struggle for independence, as upon a well grounded conviction that it is consonant with the true policy of both. The people of the United States could not, therefore, see without the deepest regret, even a temporary interruption of the friendly relations between the two countries—a regret which would, I am sure, be greatly aggravated if there should turn out to be any reasonable ground for attributing such a result to any act of omission or commission on our part. I derive, therefore, the highest satisfaction from being able to assure you that the whole course of this Government has been characterised by a spirit so conciliatory and forbearing as to make it impossible that our justice and moderation should be questioned, whatever may be the consequences of a longer perseverance on the part of the French Government in her omission to satisfy the conceded claims of our citizens.

The history of the accumulated and unprovoked aggressions upon our commerce, committed by authority of the existing Governments of France, between the years 1800 and 1817, has been rendered too painfully familiar to Americans to make its repetition either necessary or desirable. It will be sufficient here to remark, that there has, for many years, been scarcely a single administration of the French Government by whom the justice and legality of the claims of our citizens to indemnity, were not, to a very great extent, admitted; and yet near a quarter of a century has been wasted in ineffectual negotiations to secure it.

Deeply sensible of the injurious effects resulting from this state of things upon the interests and character of both nations, I regarded it as among my first duties to cause one more effort to be made to satisfy France, that a just and liberal settlement of our claims was as well due to her own honor as to their incontestable validity. The negotiation for this purpose was commenced with the late Government of France, and was prosecuted with such success, as to leave no reasonable ground to doubt, that a settlement of a character quite as liberal as that which was

subsequently made, would have been effected, had not the revolution, by which the negotiation was cut off, taken place. The discussions were resumed with the present government, and the result showed, that we were not wrong in supposing, that an event by which the two governments were made to approach each other so much nearer in their political principles, and by which the motives for the most liberal and friendly intercourse were so greatly multiplied, could exercise no other than a salutary influence upon the negotiation. After the most deliberate and thorough examination of the whole subject, a treaty between the two governments was concluded and signed at Paris on the 4th of July, 1831, by which it was stipulated that "the French Government, in order to liberate itself from all the reclamations preferred against it by the citizens of the United States, for unlawful seizures, captures, sequestrations, confiscations, or destruction of their vessels, cargoes, or other property, engages to pay a sum of twenty-five millions of francs to the United States, who shall distribute it among those entitled, in the manner and according to the rules it shall determine;" and it was also stipulated on the part of the French Government, that this twenty-five millions of francs should "be paid at Paris in six annual instalments of four millions one hundred and sixty-six thousand six hundred and sixty-six francs and sixty six centimes each, into the hands of such person or persons as shall be authorized by the Government of the United States to receive it." The first instalment to be paid "at the expiration of one year next following the exchange of the ratifications of this convention, and the others at successive intervals of a year, one after another, till the whole shall be paid. To the amount of each of the said instalments shall be added interest at four per centum thereupon, as upon the other instalments then remaining unpaid, the said interest to be computed from the day of the exchange of the present convention."

It was also stipulated on the part of the United States, for the purpose of being completely liberated from all the reclamations presented by France on behalf of its citizens, that the sum of one million five hundred thousand francs should be paid to the Government of France, in six annual instalments, to be deducted out of the annual sums which France had agreed to pay, interest thereupon being in like manner computed from the day of the exchange of the ratifications. In addition to this stipulation, important advantages were secured to France by the following article, viz.: "The wines of France, from and after the exchange of the ratifications of the present Convention, shall be admitted to consumption in the States of the Union, at duties which shall not exceed the following rates by the gallon, (such as it is used at present for wines in the United States,) to wit: six cents for red wines in casks; ten cents for white wines in casks; and twenty-two cents for wines of all sorts in bottles. The proportions existing between the duties on French wines thus reduced, and the general rates of the tariff which went into operation the first January, 1829, shall be maintained, in case the Government of the United States should think proper to diminish those general rates in a new tariff."

In consideration of this stipulation, which shall be binding on the United States for ten years, the French Government abandons the reclamations which it had formed in relation to the 8th article of the treaty of cession of Louisiana. It engages, moreover, to establish on the long staple cottons of the United States, which, after the exchange of the ratifications of the present Convention, shall be brought directly thence to France by the vessels of the United States, or by French vessels, the same duties as on short staple cottons.

This treaty was duly ratified in the manner prescribed by the constitution of both countries and the ratification was exchanged at the city of Washington on the 2d of February, 1832. On account of its commercial stipulations it was, in five days thereafter laid before the Congress of the United States, which proceeded to enact such laws favorable to the commerce of France as were necessary to carry it into full execution; and France has, from that period to the present been in the unrestricted enjoyment of the valuable privileges that were thus secured to her. The faith of the French nation having been thus solemnly pledged, through its constitutional organs, for the liquidation and ultimate payment of the long deferred claims of our citizens, as also for the adjustment of other points of great and reciprocal benefits to both countries, and the United States having with a fidelity and promptitude by which their conduct will, I trust, be always characterized, done every thing that was necessary to carry the treaty into full and fair effect on their part, counted with the most

perfect confidence, on equal fidelity and promptitude on the part of the French Government. In this reasonable expectation we have been, I regret to inform you, wholly disappointed. No legislative provision has been made by France for the execution of the treaty, either as it respects the indemnity to be paid, or the commercial benefits to be secured to the United States, and the relations between the United States and that power, in consequence thereof, are placed in a situation threatening to interrupt the good understanding which has so long and so happily existed between the two nations.

Not only has the French Government been thus wanting in the performance of the stipulations it has so solemnly entered into with the U States, but its omissions have been marked by circumstances which would seem to leave us without satisfactory evidences, that such performance will certainly take place at a future period. Advice of the exchange of ratifications reached Paris prior to the 8th April, 1832. The French Chambers were then sitting and continued in session until the 21st of the month, and although one instalment of the indemnity was payable on the 2d of February, 1833, one year after the exchange of ratifications, no application was made to the Chambers for the required appropriation, and in consequence of no appropriation having then been made, the draft of the United States Government for that instalment was dishonored by the Minister of Finance, and the United States thereby involved in much controversy. The next session of the Chambers commenced on the 19th November, 1832, and continued until the 25th April, 1833. Notwithstanding the omission to pay the first instalment, had been made the subject of earnest remonstrance on our part, the treaty with the United States, and a bill making the necessary appropriations to execute it, were not laid before the Chamber of Deputies until the 6th of April, nearly five months after its meeting, and only nineteen days before the close of the session. The bill was read and referred to a committee, but there was no further action upon it. The next session of the Chambers commenced on the 25th of April, 1833, and continued until the 26th of June following. A new bill was introduced on the 11th of June, but nothing important was done in relation to it during the session. In the month of April, 1834, nearly three years after the signature of the treaty, the final action of the French Chambers upon the bill to carry the treaty into effect was obtained, and resulted in a refusal of the necessary appropriations. The avowed grounds upon which the bill was rejected, are to be found in the published debates of that body, and no observations of mine can be necessary to satisfy Congress of their utter insufficiency. Although the gross amount of the claims of our citizens is probably greater than will be ultimately allowed by the Commissioners, sufficient is, nevertheless shown, to render it absolutely certain that the indemnity falls far short of the actual amount of our just claims, independently of the question of damages and interest for the detention. That the settlement involved a sacrifice in this respect was well known at the time—a sacrifice which was cheerfully acquiesced in by the different branches of the Federal Government, whose action upon the treaty was required, from a sincere desire to avoid further collision upon this old and disturbing subject, and in the confident expectation that the general relations between the two countries would be improved thereby.

The refusal to vote the appropriation, the news of which was received from our Minister in Paris, about the 15th day of May last, might have been considered the final determination of the French government not to execute the stipulations of the treaty, and would have justified an immediate communication of the facts to Congress, with a recommendation of such ultimate measures as the interest and honor of the U. States might seem to require. But with the news of the refusal of the Chambers to make the appropriation, were conveyed the regrets of the King, and a declaration that a national vessel should be forthwith sent out, with instructions to the French Minister to give the most ample explanations of the past, and the strongest assurances for the future. After a long passage the promised despatch-vessel arrived. The pledges given by the French Minister, upon receipt of his instructions, were, that as soon after the election of the new members as the charter would permit, the legislative Chambers of France should be called together, and the proposition for an appropriation laid before them; that all the constitutional powers of the King and his Cabinet should be exerted to accomplish the object; and that the result should be made known early enough to be communicated to Congress at the commencement of the pr

[See page 758]

Animal Mechanics, or Proofs of Design in the Animal Frame. Part II., showing the Application of the Living Forces. [From the Library of Useful Knowledge.]

(Continued from page 695.)

OF THE CHANGES IN THE MATERIAL OF THE ANIMAL BODY DURING LIFE.—We have seen the motions performed in the animal body through the actions of the muscles and the play of the mechanical parts, and we have had occasion to reflect on the action of the heart, and the motion of the blood in the circulation; but these are as nothing, compared with the interest of our present subject—the changes going forward in the solid material of the frame. It is not surprising that the individual who retains every peculiarity of body and of mind, whose features, whose gait, and mode of action, whose voice, gestures, and complexion, we are ready to attest as the very proof of personality, should in the course of a few days change every particle of his solid fabric?—that he whom we suppose we saw, is, as far as his body is concerned, a perfectly different person from him we now see? That the fluids may change we are ready to allow, but that the solids are thus ever shifting seems at first improbable. And yet, if there be any thing firmly established in physiology, if there be truth in the science at all, this fact is incontrovertible.

There is nothing like this in inanimate nature. It is beautiful to see the shooting of a crystal—to note, first, the formation of integrant particles from their elements in solution, and these, assuming a regular form under the influence of attraction or crystalline polarity, producing a determinate shape; but the form is permanent. In the different processes of elective attraction, and in fermentation, we perceive a commotion, but in a little time the products are formed, and the particles are at rest. There is in these instances nothing like the revolutions of the living animal substance, where the material is alternately arranged and decomposed. The end of this is that the machinery of the body is ever new, and possesses a property within itself of mending that which was broken, of throwing off that which was useless, and of building up that which was insecure and weak; of repelling disease, or of controlling it, and substituting what is healthful for that which is morbid. The whole animal machinery we have seen to be a thing fragile and exposed to injury; without this continual change of material, and this new modelling of that material, our lives would be more precarious; the texture of our bodies would be spoiled like some fine piece of mechanism which had stopped, and no workman would have science sufficient to reconstruct it. But by this process the minute particles of the body die successively; not as in the final death of the whole body, but part by part is deprived of its vitality, and taken away into the general circulation, whilst new parts are endowed with the property of life, and are built up in their place. By this revolution, we see nature, instead of having to establish a new mode of action for every casualty, heals all wounds, unites all broken bones, throws off all morbid parts by the continuance of its usual operations; and the surgeon, who is modest in his calling, has nothing to do but to watch, lest ignorance or prejudice interfere with the process of nature. This property of the living body

to restore itself when deranged, or to heal itself when broken or torn, is an action which so frequently assumes the appearance of reason, as if it were adapting itself to the particular occasion, that even the last great luminary in the science, Mr. John Hunter, speaks of parts of the body as “conscious of their imperfection,” and “acting from the stimulus of necessity,” thus giving the properties of mind to the body as the only explanation of phenomena so wonderful.

We make a moderate assumption, when we declare these changes to be under the guidance of the living principle. In a seed, or a nut, or an egg, we know that there is life, and from the length of time that these bodies will remain without change, we are forced to acknowledge that this life is stationary or dormant, and limited to the counteraction of putrefaction, or chemical decomposition; but no sooner does this principle become active, than a series of intestinal or internal changes are commenced, which are regularly progressive, without a moment's interruption, while life continues.

That principle, which may continue an indefinite number of days, months, or years, producing no change in all this time, begins at once to exhibit its influence, builds up the individual body, regulates the actions of secretion and absorption; and by its operation upon the material of the frame, stamps it with external marks of infancy, maturity, and age.

But let us examine the proofs of this universal change in the material of the body. It is not very long since a bone was supposed to be a concrete juice, and that the liquid parts were converted into solids, as we see mortar or Paris plaster from fluid assuming a solid form. But the anatomist began to observe that the bones were porous; that these pores admitted membranes and vessels; and some went so far before their brethren, as to assert that they saw arteries, veins, lymphatics, and nerves, going into the bone; in short, the opinion gradually grew stronger, that they were living parts, and subject to all the changes to which the softer parts of the living body were liable. An accident gave admirable proof of this. It was found that the bones of pigs, fed with the refuse of the dyer's vats, in which madder was contained, became tinged of a beautiful red color. It was this fact which ingenious physiologists made use of, and which enabled them to demonstrate the rapidity with which the old bone was carried away, and new bone substituted. The physiologist observed, that if he threw a bone into the fire, what is called the animal part was burned and dissipated, but there remained, imperishable by this process, a mass of earth, which proved to be the phosphate of lime. He thought of varying his experiment, and put the bone into acid, which dissolved that phosphate of lime, and left the bone to all outward appearance as before. It had its form, its membranes, its vessels, but when pressed it proved to be soft and pliant; the phosphate of lime having been dissolved and extracted, it was no longer capable of the office of a bone, to bear the weight and motions of the body. When the experiments with madder were resumed, it appeared that when this earth of bone was about to be secreted from the circulating vessels, and deposited in the membranes of the bone, it met with the coloring particles of the madder in the blood; and, as the chemist would

explain, the madder and the phosphate of lime were precipitated, and filled all the interstices of the membranes and vessels. We shall not stop here to inquire into the admirable manner in which this hardening material of bone is deposited for the purposes of strength; it is only the change upon the material which we have now to contemplate.

If this earth of bone so colored had been deposited for a permanency, and built into these cells and crevices, like brick and mortar, the color would remain; but, however deeply the bones of an animal may be tinged in this manner, the color is not permanent, unless the animal continues to be fed with the madder. If its food be pure of the madder, even for a few weeks, and if after this the animal be killed, its bones are white, that is to say, the old particles of phosphate of lime are carried away by absorption, and with them the coloring material; and that newer bone which is deposited by the arteries is untinged and pure, having no coloring material to attract.

It is unnecessary to follow out those curious experiments by which the physiologist has shown the rapidity of the formation of a new bone around the broken end of an old one, and the deep tinge such new bone takes, compared with the fainter color of that which had been perfect, previous to the feeding with madder; the manner in which, by feeding the animal alternately with madder and without it, he contrives to exhibit different colored layers in the growing bone. It is sufficient for our purpose to know, that the densest part of the animal frame is subject to change, like the most delicate texture of the body, and that the only means of arresting the motion is to deprive it of life; if a part of a bone be killed by the application of a cautery, that moment it becomes permanent, and is subject to no change, whilst all the parts around it are undergoing their revolutions.

The bones of the legs and thighs, which suffer the fatigue of motion, and which support the weight of the body, without diminishing in their length, or altering in the slightest measurable degree their proper form, are nevertheless undergoing an operation of repair, in which the old particles are withdrawn, whilst new ones replace them. We see with what care the walls of a house are shored up to admit of repair—how carefully the workman must estimate the strength of his pillars and beams—how nicely he must hammer in his wedges, that every interstice may be filled, and no strain permitted; and if this operation fail in the slightest degree, it is attended with a rent of the wall from top to bottom. We say, then, that by the very awkwardness of this process, in which, after all, there is danger of the whole fabric tumbling about the workmen, we are called upon to admire how the solid pillars in our own frame are a thousand times renewed, whilst the plan of the original fabric is followed to the utmost nicety in their restoration. And if it deviate at all, it is only in a manner the more to surprise us, since on examination it will be discovered to result from an adaptation of the strength of material to some new circumstance, the increasing weight it has to support, or the jar that it is subject to from the change in the activity or exercise of the body.

There is a disease of the bone which illustrates this in a surprising manner, and proves to us, that however diseased and monstrous

in its shape the bone may be, yet there is a natural law operating, which by its prevalence will overcome the morbid action, and from a shapeless mass restore the bone to its natural condition.

This disease is called *necrosis*, which word signifies the *death* of the bone merely; but it is death in very peculiar circumstances; a new bone is formed around the old one; a large and clumsy cylinder is fashioned of the earth of bone, in the hollow of which the shaft of the old bone is contained. After a long time the old bone comes out through this new case, and, with the aid of the surgeon, it is altogether withdrawn from the limb. During all this process the patient is capable of supporting his weight upon that limb, so that it resembles on a large scale that change which we have described as going continually on in the molecules of the bone; a new part is substituted, and the old taken away.

If workmen were to take away a pillar in the following manner, their work would resemble the process of necrosis: first, they must rear a hollow cylinder around the old pillar, resting on the plinth and base, and extending to the capital, and having secured the union of the cylinder at top and bottom to the extremities of the pillar, they must take away the shaft, or middle piece of the old pillar, by perforating the new cylinder.

The reader may easily imagine that when this process is completed in a man's limb, it will be as clumsy as the leg of an elephant, large, firm, and shapeless; but the extraordinary circumstance is still to be described. This new bone is gradually diminished in its exterior surface, and its hollow filled up, and thus by a change scarcely perceptible it resumes the form and dimensions of the original bone; and, after a time, the anatomist might examine this limb, and find, neither in the articulating surfaces, nor in the spines and ridges, nor in the points of attachment for ligaments and muscles, any thing to indicate the extraordinary revolution that had taken place.

What explanation have we to give of this change? There can be no doubt that the material is not the same; for we have the old bone in our hand, and the man is walking upon a new bone. Yet extraordinary, then, as this appears, it is not more inexplicable than the common phenomenon of the growth of an infant to maturity. There is a living principle which is permanent while the material changes; and this principle attracts and arranges, dissolves and throws off successive portions of the solids. There is a law influencing this living principle, which, in its operation on the material, shapes and limits the growth of every part, and carries it through a regular series of changes, in which its form and aptness for its office are preserved, whilst the material alone is altered.

The influence of disease will for a time disorder this modelling process, and produce tumors and distortions; but when at length the healthy action, that is the natural action, prevails, these incumbrances are carried away, and the fair proportions of the fabric are restored.

It is very pleasing to observe the different means employed where a slight change of circumstances demands it. This earth of bone—the phosphate of lime—is changing continually, but the teeth admit of no change; they consist of earth too—the phosphate,

carbonate, and fluuate of lime. Bodies calculated for such violent attrition, and with a surface so hard as to strike fire with steel, would be ill accommodated with such a property of changing as we have seen in the bones. They must therefore fall out, and be succeeded by new ones; and this process, familiar as it may be, is very curious when philosophically considered.

There are no teeth whilst yet the infant is at the breast; and when they rise they are attended with new appetites, and a necessity for change of food. When perfected, they form a range of teeth, neat and small, adapted to the child's jaws and the size of its bones. Were they to grow at once, or to fall out at once, it would prove a disturbance to the act of eating. They fall in succession; their fangs are absorbed, they are loose and jangling, and are easily extracted. But now comes the question, why are these teeth of the infant old at six years? Why are those that are to succeed, and be stationary for a series of years, to germinate and grow at the appointed time, like the buds in the axilla of a leaf? And when fully formed, why do they remain perfect for sixty years instead of six, at the end of which term the first set were old and decayed? No difference can be observed in the material of the teeth of the first or second set. The one will be as perfect as the other after remaining a hundred years in a charnel house. Can any one refuse his belief, then, when he sees so accurate a mechanical adaptation of the teeth to their places and their offices; can he, we say, refuse assent to this also, that there is a law impressed, a property by which the milk teeth shall fall and be discharged from the jaw in six years, whilst the others will last the natural life of the adult, if not injured by accidents, to which all parts are subject? This is not the only instance in which parts of the body lie dormant for a term of years, and are at a particular period of life developed and perfected—and which have, we may say, their time of infancy, perfection, and decay, whilst yet there is no material deterioration observable in the general frame.

We are thus brought to the consideration of a question which has not yet been fairly stated.

Those who say that life results from structure, and that the material is the ruling part, bid us look to the contrast of youth and age. The activity of limb and buoyancy of spirit they consider as a necessary consequence of the newness and perfection of organization in youth. On the other hand, a ruined tower, unroofed, and exposed to be broken up by alternation of frost and heat, dryness and moisture, wedged by the roots of ivy, and tottering to its fall, they compare with old age—with the shrunk limbs, tottering gait, shrivelled face, and scattered grey hair of the old.

But in all this there is not a word of truth. Whilst there is life and circulation there is change of the material of the frame, (and there is a sign of this if a broken bone unites, or a wound heals.) Ascribe the distinction to the rapidity of change, to the velocity of circulation, or to the more or less energy of action; but with the antiquity of the material it can have nothing to do. The roundness and fullness of flesh, the smoothness, transparency, and color of the cheek, belong to youth, as characteristic of the time of life, not as a necessary quality of the material!

Is there a physiognomy in all nature—among birds, and beasts, and insects, and flowers—and shall man alone have no indication of his condition in the outward form and character?

The distinctions in the body, apparent in the stages of life, have a deeper source than the accidental effects of the deterioration of the material of the frame. The same changes which are wrought on the structure of the body in youth, and in the spring of life, are going on in the last term of life; but the fabric is rebuilt on a different plan. The law of the formation is still inherent in the life which has hurried the material of the body through a succession of changes; and each stage, from the embryo to the fetus, the fetus to the child, from that to adolescence, to maturity, and to the condition of old age, has its outward form, as indicative of internal qualities, but not of the perfection or imperfection of the gross material. We might as well consider the difference in the term of life of the annual or biennial plant, as compared with the oak, or the ephemeral fly as compared with the bird that hawks at it, to be in the qualities of the matter which forms them, as that the outward characters of the different stages of human life arose from the perfection or imperfection of the material of the body. Not only has every creature its appointed term of life, but we have shown that parts of the human body do not, in this respect, bear a relation to the whole: organs are changed and disappear; others, in the mean time, at their regulated period, shoot to perfection, and again decay before the failure of the body. What can more distinctly show that it is the principle of life that directs all; and that on it the law is imprinted which orders our formation, and all the revolutions we undergo. The material of the body, solid and fluid, is moved by this influence, and varies every day, part by part dying every hour, and renewed, until the series of its changes on the gross material of the body is accomplished in an entire and final separation.

The grand phenomena of nature make powerful impression on our imagination, and we acknowledge them to be under the guidance of Providence; but it is more pleasing, more agreeable to our self-importance, it gives us more confidence in that Providence, to discover that the minutest changes in nature are equally His care, and that "all things do homage."

Although it be true that every thing in nature, being philosophically contemplated, will lead to the same conclusions, yet the occurrences around us steal so imperceptibly on our observation, all the objects of nature, or at least vegetable and animal productions, grow up by so slow a process by our side, that we do not consider them at all in the same way as we should do if they started suddenly upon our vision.

It is this familiarity with the qualities of a living body, and a habit of seeing without reflection, which has made it necessary to carry the reader through so long a course of observation and reasoning to excite attention to the admirable structure of his own frame, and its adaptation to the earth we inhabit—to perceive that every thing is formed with a strict relation to the human faculties and organs, to extend our dominion, and to multiply our sources of enjoyment. It is by seeing the plan of Providence in the establishment of relations between the condition

of our being and the material world, that we learn to comprehend that unity of design in the creation in which we form so great a part.

This exaltation of our nature is not like the influence of pride or common ambition. We may use the words of Socrates to his scholar, who saw in the contemplation of nature only a proof of his own insignificance, and concluded "that the gods had no need of him," which drew this answer from the sage: "The greater the munificence they have shown in the care of thee, so much the more honor and service thou owest them!"

PRESIDENT'S MESSAGE—continued from p. 757.

sion. Relying upon these pledges, and not doubting that the acknowledged justice of our claims, the promised exertions of the King and his Cabinet, and, above all, that sacred regard for the national faith and honor for which the French character has been so distinguished, would secure an early execution of the treaty in all its parts, I did not deem it necessary to call the attention of Congress to the subject at the last session.

I regret to say, that the pledges made through the Minister of France have not been redeemed. The new Chambers met on the 31st July last, and although the subject of fulfilling treaties was alluded to in the speech from the throne, no attempt was made by the King or his Cabinet to procure an appropriation to carry it into execution. The reasons given for this omission, although they might be considered sufficient in an ordinary case, are not consistent with the expectations founded upon the assurances given here, for there is no constitutional obstacle to entering into legislative business at the first meeting of the Chambers. This point, however, might have been overlooked, had not the Chambers, instead of being called to meet at so early a day, that the result of their deliberations might be communicated to me, before the meeting of Congress, been prorogued to the 29th of the present month—a period so late that their decision can scarcely be made known to the present Congress, prior to their dissolution. To avoid this delay, our Minister in Paris, in virtue of the assurance given by the French Minister in the United States, strongly urged the convocation of the Chambers at an earlier day, but without success. It is proper to remark, however, that this refusal has been accompanied with the most positive assurances, on the part of the Executive Government of France, of their intention to press the appropriation at the ensuing session of the Chambers.

The executive branch of this government has, as matters stand, exhausted all the authority upon the subject with which it is invested, and which it had any reason to believe could be beneficially employed.

The idea of acquiescing in the refusal to execute the treaty will not, I am confident, be for a moment entertained by any branch of this government; and further negotiation is equally out of the question.

If it shall be the pleasure of Congress to await the further action of the French Chambers, no further consideration of the subject will, at this season, probably be required at your hands. But if, from the original delay in asking for an appropriation, from the refusal of the Chambers to grant it when asked, from the omission to bring the subject before the Chambers at their last session, from the fact that, including that session, there have been five different occasions when the appropriation might have been made, and from the delay in convoking the Chambers until some weeks after the meeting of Congress, it was well known that a communication of the whole subject to Congress at the last session was prevented by assurances that it should be disposed of before its present meeting, you should feel yourselves constrained to doubt whether it be the intention of the French Government in all its branches to carry the treaty into effect, and think that such measures as the occasion may be deemed to call for, should be now adopted, the important question arises what those measures shall be.

Our institutions are essentially pacific. Peace and friendly intercourse with all nations are as much the desire of our government as they are the interest of the People. But these objects are not to be permanently secured, by surrendering the rights of our citizens, or permitting solemn treaties for their indemnity in cases of flagrant wrong, to be abrogated or set aside.

It is undoubtedly in the power of Congress serious-

ly to affect the agricultural and manufacturing interests of France, by the passage of laws relating to her trade with the United States. Her products, manufactures, and tonnage, may be subjected to heavy duties in our ports, or all commercial intercourse with her may be suspended. But there are powerful, and, to my mind, conclusive objections to this mode of proceeding. We cannot embarrass or cut off the trade of France, without, at the same time, in some degree, embarrassing or cutting off our own trade. The injury of such a warfare must fall, though unequally, upon our citizens, and could not but impair the means of the Government, and weaken that united sentiment in support of the rights and honor of the nation which must now pervade every bosom.

Nor is it impossible that such a course of legislation would introduce once more into our national councils, those disturbing questions in relation to the tariff of duties which have been so recently put to rest. Besides, by every measure adopted by the Government of the United States with the view of injuring France, the clear perception of right, which will induce our own people, and the rulers and people of all other nations, even of France herself, to pronounce our quarrel just, will be obscured, and the support rendered to us in a final resort to more decisive measures, will be more limited and equivocal. There is put one point in the controversy, and upon that the whole civilized world must pronounce France to be in the wrong. We insist that she shall pay us a sum of money which she has acknowledged to be due; and of the justice of this demand there can be but one opinion among mankind. True policy seems to dictate, that the question at issue should be kept thus disencumbered, and that not the slightest pretence should be given to France to persist in her refusal to make payment, by any act on our part affecting the interest of her people. The question should be left as it is now, in such an attitude that when France fulfils her treaty stipulations, all controversy will be at an end.

It is my conviction that the United States ought to insist on a prompt execution of the treaty, and in case it be refused, or longer delayed, take redress into their own hands. After the delay on the part of France of a quarter of a century in acknowledging these claims by treaty, it is not to be tolerated that another quarter of a century is to be wasted in negotiating about the payment. The laws of nations provide a remedy for such occasions. It is a well settled principle of the international code, that where one nation owes another a liquidated debt, which it refuses or neglects to pay, the aggrieved party may seize on the property belonging to the other, its citizens or subjects, sufficient to pay the debt, without giving just cause of war. This remedy has been repeatedly resorted to, and recently by France herself, towards Portugal, under circumstances less unquestionable.

The time at which resort should be had to this, or any other mode of redress, is a point to be decided by Congress. If an appropriation shall not be made by the French Chambers at their next session, it may justly be concluded that the Government of France has finally determined to disregard its own solemn undertaking, and refuse to pay an acknowledged debt. In that event, every day's delay on our part will be a stain upon our national honor, as well as a denial of justice to our injured citizens. Prompt measures, when the refusal of France shall be complete, will not only be most honorable and just, but will have the best effect upon our national character.

Since France, in violation of the pledges given through her minister here, has delayed her final action so long that her decision will not probably be known in time to be communicated to this Congress, I recommend that a law be passed authorizing reprisals upon French property, in case provision shall not be made for the payment of the debt at the approaching session of the French Chambers. Such a measure ought not to be considered by France as a menace. Her pride and power are too well known to expect any thing from her fears, and preclude the necessity of a declaration that nothing partaking of the character of intimidation is intended by us. She ought to look upon it as the evidence only of an inflexible determination on the part of the United States to insist on their rights. That Government, by doing only what it has itself acknowledged to be just, will be able to spare the United States the necessity of taking redress in their own hands, and save the property of French citizens from that seizure and sequestration which American citizens so long endured without retaliation or redress. If she should continue to refuse that act of acknowledged justice, and in violation of the law of nations, make reprisals on our part the occasion of hostilities against the United States, she would but add violence to injustice, and could not fail to expose herself to the just censure of civilized nations, and the retributive judgments of Heaven.

Collision with France is the more to be regretted, on account of the position she occupies in Europe in relation to liberal institutions. But, in maintaining our national rights and honor, all Governments are alike to us. If, by a collision with France, in a case where she is clearly in the wrong, the march of liberal principles shall be impeded, the

responsibility for that result, as well as every other, will rest on her own head.

Having submitted these considerations, it belongs to Congress to decide, whether, after what has taken place, it will still await the further action of the French Chambers, or now adopt such provisional measures as it may deem necessary and best adapted to protect the rights and maintain the honor of the country. Whatever that decision may be, it will be faithfully enforced by the Executive, as far as he is authorized so to do.

According to the estimate of the Treasury Department, the revenue accruing, from all sources, during the present year, will amount to twenty millions six hundred and twenty-four thousand seven hundred and seventeen dollars, which with the balance remaining in the Treasury on the first of January last, of eleven millions seven hundred and two thousand nine hundred and five dollars, produces an aggregate of thirty-two millions three hundred and twenty-seven thousand six hundred twenty-three dollars. The total expenditure during the year for all objects, including the public debt, is estimated at twenty-five millions five hundred and ninety-one thousand three hundred and ninety dollars, which will leave a balance in the Treasury on the first of January, 1835, of six millions seven hundred and thirty-six thousand two hundred and thirty-two dollars. In this balance, however, will be included about one million one hundred and fifty thousand dollars of what was heretofore reported by the Department as not effective.

Of former appropriations it is estimated there will remain unexpended at the close of the year, eight millions two thousand nine hundred and twenty-five dollars, and that of this sum there will not be required more than five millions one hundred and forty-one thousand nine hundred and sixty-four dollars, to accomplish the objects of all the current appropriations. Thus it appears that after satisfying all those appropriations, and after discharging the last item of our public debt, which will be done on the first of January next, there will remain unexpended in the Treasury an effective balance of about four hundred and forty thousand dollars. That such should be the aspect of our finances is highly flattering to the industry and enterprise of our population, and auspicious of the wealth and prosperity which await the future cultivation of their growing resources. It is not deemed prudent, however, to recommend any change for the present in our impost rates, the effect of the gradual reduction now in progress in many of them, not being sufficiently tested to guide us in determining the precise amount of revenue which they will produce.

Free from public debt, at peace with all the world, and with no complicated interests to consult in our intercourse with foreign powers, the present may be hailed as that epoch in our history the most favorable for the settlement of those principles in our domestic policy, which shall be best calculated to give stability to our Republic, and secure the blessings of freedom to our citizens. Among these principles, from our past experience, it cannot be doubted, that simplicity in the character of the Federal Government, and a rigid economy in its administration, should be regarded as fundamental and sacred. All must be sensible that the existence of the public debt, by rendering taxation necessary for its extinguishment, has increased the difficulties which are inseparable from every exercise of the taxing power; and that it was, in this respect, a remote agent in producing those disturbing questions which grew out of the dissensions relating to the tariff. If such has been the tendency of a debt incurred in the acquisition and maintenance of our national rights and liberties, the obligations of which all portions of the Union cheerfully acknowledged; it must be obvious, that whatever is calculated to increase the burdens of Government without necessity, must be fatal to all our hopes of preserving its true character. While we are felicitating ourselves, therefore, upon the extinguishment of the national debt, and the prosperous state of our finances, let us not be tempted to depart from those sound maxims of public policy, which enjoin a just adaptation of the revenue to the expenditures that are consistent with a rigid economy, and an entire abstinence from all topics of legislation that are not clearly within the constitutional powers of the Government, and suggested by the wants of the country. Properly regarded, under such a policy, every diminution of the public burdens arising from taxation, gives to individual enterprise increased power, and furnishes to all the members of our happy Confederacy, new motives for patriotic affection and support. But above all, its most important effect will be found in its influence upon the character of the Government, by confining its action to those objects which will be sure to secure to it the attachment and support of our fellow citizens.

Circumstances make it my duty to call the attention of Congress to the Bank of the United States. Created for the convenience of the Government, that institution has become the source of the People. Its interference to postpone the payment of a portion

of the national debt, that it might retain the public money appropriated for that purpose, to strengthen it in a political contest—the extraordinary extension and contraction of its accommodations to the community—its corrupt and partisan loans—its exclusion of the public directors from a knowledge of its most important proceedings—the unlimited authority conferred on the President to expend its funds in hiring writers, and procuring the execution of printing, and the use made of that authority—the retention of the pension money and books, after the selection of new agents—the groundless claim to heavy damages, in consequence of the protest of the bill drawn on the French Government, have, through various channels, been laid before Congress. Immediately after the close of the last session, the Bank, through its President, announced its ability and readiness to abandon the system of unparalleled curtailment, and the interruption of domestic exchanges, which it had practised upon from the 1st of August, 1833, to the 30th June, 1834, and to extend its accommodations to the community. The grounds assumed in this announcement, amounted to an acknowledgment that the curtailment, in the extent to which it had been carried, was not necessary to the safety of the Bank, and had been persisted in merely to induce Congress to grant the prayer of the Bank in its memorial relative to the removal of the depositors, and to give it a new charter. They were substantially a confession that all the real distresses which individuals and the country had endured for the preceding six or eight months, had been needlessly produced by it, with the view of affecting, through the sufferings of the people, the legislative action of Congress. It is a subject of congratulation, that Congress and the country had the virtue and firmness to bear the infliction; that the energies of our people soon found relief from this wanton tyranny, in vast importations of the precious metals from almost every part of the world; and that at the close of this tremendous effort to control our Government, the Bank found itself powerless, and no longer able to loan out its surplus means. The community had learned to manage its affairs without its assistance, and trade had already found new auxiliaries; so that on the first of October last, the extraordinary spectacle was presented of a National Bank, more than one half of whose capital was either lying unproductive in its vaults, or in the hands of foreign bankers.

To the needless distress brought on the country during the last session of Congress, has been added the open seizure of the dividends on the public stock, to the amount of one hundred and seventy thousand and forty one dollars, under pretence of paying damages, costs, and interest, upon the protested French bill. The sum constituted a portion of the estimated revenues for the year 1834, upon which the appropriations made by Congress were based. It would have as soon been expected that our collectors would seize on the customs, or the receivers of our land offices on the monies arising from the sale of public lands, under pretences of claims against the United States, as the Bank would have retained the dividends. Indeed, if the principle be established that any one who chooses to set up a claim against the United States, may, without authority of law, seize on the public property or money wherever he can find it, to pay the claim, there will remain no assurance that our revenue will reach the Treasury, or that it will be applied after the appropriation to the purposes designated in the law. The paymasters of our army, and the pursers of our navy, may, under like pretences, apply to their own use monies appropriated to set in motion the public force, and in time of war leave the country without defence. This measure resorted to by the Bank is disorganizing and revolutionary, and if generally resorted to by private citizens in like cases, would fill the land with anarchy and violence.

It is a constitutional provision that "no money shall be drawn from the Treasury but in consequence of appropriations made by law." The palpable object of this provision is to prevent the expenditure of the public money, for any purpose whatsoever, which shall not have been first approved by the Representatives of the People and the States in Congress assembled. It vests the power of declaring for what purposes the public money shall be expended, in the legislative department of the government, to the exclusion of the executive and judicial, and it is not within the constitutional authority of either of those departments, to pay it away without law, or to sanction its payment. According to this plain constitutional provision the claim of the Bank can never be paid without an appropriation by act of Congress. But the Bank has never asked for an appropriation. It attempts to defeat the provision of the constitution,

and obtain payment without an act of Congress. Instead of awaiting an appropriation passed by both Houses, and approved by the President, it makes an appropriation for itself, and invites an appeal to the judiciary to sanction it. That the money had not technically been paid into the Treasury, does not affect the principle intended to be established by the constitution. The Executive and Judiciary have as little right to appropriate and expend the public money without authority of law, before it is placed to the credit of the Treasurer, as to take it from the Treasury. In the annual report of the Secretary of the Treasury, and in his correspondence with the President of the Bank, and the opinion of the Attorney General accompanying it, you will find a further examination of the claims of the bank, and the course it has pursued.

It seems due to the safety of the public funds remaining in that Bank, and to the honor of the American People, that measures be taken to separate the Government entirely from an institution so mischievous to the public prosperity, and so regardless of the Constitution and laws. By transferring the public deposits, by appointing other Pension Agents, as far as it had the power, by ordering the discontinuance of the receipt of Bank checks in payment of the public dues after the first day of January next, the executive has exerted all its lawful authority to sever the connexion between the Government and this faithless corporation.

The high-handed career of this institution imposes upon the constitutional functionaries of this Government, duties of the gravest and most imperative character—duties which they cannot avoid, and from which I trust there will be no inclination on the part of any of them to shrink. My own sense of them is most clear, as is also my readiness to discharge those which may rightfully fall on me. To continue any business relations with the Bank of the United States that may be avoided without a violation of the national faith, after that institution has set at open defiance the conceded right of the Government to examine its affairs, after it has done all in its power to deride the public authority in other respects, and to bring it into disrepute at home and abroad; after it has attempted to defeat the clearly expressed will of the people by turning against them the immense power intrusted to its hands, and by involving a country otherwise peaceful, flourishing, and happy, in dissensions, embarrassment, and distress—would make the nation itself a party to the degradation so sedulously prepared for its public agents—and do much to destroy the confidence of mankind in popular governments, and to bring into contempt their authority and efficiency. In guarding against an evil of such magnitude, considerations of temporary convenience should be thrown out of the question, and we should be influenced by such motives only as look to the honor and preservation of the republican system. Deeply and solemnly impressed with the justice of these views, I feel it to be my duty to recommend to you, that a law be passed authorizing the sale of the public stock; that the provision of the charter requiring the receipt of notes of the Bank in payment of public dues, shall, in accordance with the power reserved to Congress in the 14th Section of the charter, be suspended until the Bank pays to the Treasury the dividends withheld; and that all laws connecting the Government or its officers with the Bank, directly or indirectly, be repealed; and that the institution be left hereafter to its own resources and means.

Events have satisfied my mind, and I think the minds of the American People, that the mischiefs and dangers which flow from a National Bank far overbalance all its advantages. The bold effort the present Bank has made to control the Government, the distresses it has wantonly produced, the violence of which it has been the occasion in one of our cities famed for its observance of law and order, are but premonitions of the fate which awaits the American people, should they be deluded into a perpetuation of this institution, or the establishment of another like it. It is fervently hoped, that, thus admonished, those who have heretofore favored the establishment of a substitute for the present bank, will be induced to abandon it, as it is evidently better to incur any inconvenience that may be reasonably expected, than to concentrate the whole monied power of the Republic in any form whatsoever, or under any restrictions.

Happily it is already illustrated that the agency of such an institution is not necessary to the fiscal operations of the Government. The State Banks are found fully adequate to the performance of all services which were required of the Bank of the United States, quite as promptly, and with the same cheapness. They have maintained themselves, and dis-

charged all these duties, while the Bank of the United States was still powerful, and in the field as an open enemy; and it is not possible to conceive that they will find greater difficulties in their operations, when that enemy shall cease to exist.

The attention of Congress is earnestly invited to the regulation of the deposits in the State Banks, by law. Although the power now exercised by the Executive Department in this behalf, is only such as was uniformly exerted through every Administration from the origin of the Government up to the establishment of the present Bank, yet, it is one which is susceptible of regulation by law, and, therefore, ought so to be regulated. The power of Congress to direct in what places the Treasurer shall keep the moneys in the Treasury, and to impose restrictions upon the Executive authority in relation to their custody and removal, is unlimited, and its exercise will rather be courted than discouraged by those public officers and agents on whom rests the responsibility for their safety. It is desirable that as little power as possible should be left to the President or Secretary of the Treasury over those institutions—which, being thus freed from Executive influence, and without a common head to direct their operations, would have neither the temptation nor the ability to interfere in the political conflicts of the country. Not deriving their charters from the national authorities, they would never have those inducements to meddle in general elections, which have led the Bank of the United States to agitate and convulse the country for upwards of two years.

The progress of our gold coinage is creditable to the officers of the mint, and promises in a short period to furnish the country with a sound and portable currency, which will much diminish the inconvenience to travellers of the want of a general paper currency, should the State banks be incapable of furnishing it. Those institutions have already shown themselves competent to purchase and furnish domestic exchange for the convenience of trade, at reasonable rates, and not a doubt is entertained that, in a short period, all the wants of the country in bank accommodations and exchange will be supplied as promptly and cheaply as they have heretofore been by the Bank of the United States. If the several States shall be induced gradually to reform their banking systems, and prohibit the issues of all small notes, we shall, in a few years, have a currency as sound, and as little liable to fluctuations, as any other commercial country.

The report of the Secretary of War, together with the accompanying documents from the several bureaux of that Department, will exhibit the situation of the various objects committed to its administration.

No event has occurred since your last session rendering necessary the movements of the army, with the exception of the expedition of the regiment of dragoons into the territory of the wandering and predatory tribes inhabiting the western frontier, and living adjacent to the Mexican boundary. These tribes have been heretofore known to us principally by their attacks upon our own citizens and upon other Indians entitled to the protection of the United States. It became necessary for the peace of the frontiers to check these habitual inroads, and I am happy to inform you that the object has been effected without the commission of any act of hostility. Col. Dodge, and the troops under his command, have acted with equal firmness, and an arrangement has been made with those Indians, which it is hoped will assure their permanent pacific relations with the United States and the other tribes of Indians upon that border. It is to be regretted that the prevalence of sickness in that quarter has deprived the country of a number of valuable lives, and particularly that General Leavenworth, an officer well known and esteemed for his gallant services in the late war, and for his subsequent good conduct, has fallen a victim to his zeal and exertions in the discharge of his duty.

The army is in a high state of discipline. Its moral condition, so far as that is known here, is good, and the various branches of the public service are carefully attended to. It is amply sufficient, under its present organization, for providing the necessary garrisons for the sea-board and for the defence of the internal frontier, and also for preserving the elements of military knowledge, and for keeping pace with those improvements which modern experience is continually making. And these objects appear to me to embrace all the legitimate purposes for which a permanent military force should be maintained in our country. The lessons of history teach us its danger, and the tendency which exists to an increase. This can be best met and averted by a just caution on the part of the public itself, and of those who represent them in Congress: [See page 764.]

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LITERARY NOTICES.

THE INFLUENCE OF MORAL CAUSES UPON OPINION, SCIENCE, AND LITERATURE: BY G. C. VERPLANCK, L. L. D. Amherst College. New York: H. Ludwig. This is a discourse delivered by Mr. Verplanck before the Literary Societies of Amherst College, and at their request in August last. It treats of high matters in a high and worthy strain; and if its counsels be as advisedly acted on as they are eloquently enforced, they cannot fail to produce public benefit, while conferring individual happiness and renown.

The study of Truth is the great lesson inculcated throughout these pages—and the dictum alike wise and true, that "the Creator seems to have ordained a connexion between Truth and Goodness, so that as Truth is the natural teacher of Goodness, Goodness again is the surest guide to Truth," is enforced by the analogy of nature and the harmony of the universe, as well as by the adaptation of the moral nature of man to his physical condition.

To Truth, sought in the spirit of humility—sought as Newton sought it, not for victory, but with an enduring and patient spirit, desiring to arrive at that knowledge, which is not only Power but Virtue—how fine a tribute is paid in the following extract:

The implicit devotion to truth is not only a positive virtue in itself, but it includes or implies many others. It implies, of course, if not an entire exemption from the malignant, envious, and selfish vices, at least the power of perceiving them in our own breasts, and of bringing them into subjection to reason and conscience whenever they impede the right exercise of the judgment. It implies also the possession and practice of several distinct and positive virtues. That patience of labor and endurance of disappointment, such as, in the active concerns of life, preserve the even balance of the faculties, fit them to all the duties of society, and bear the possessor steadily over the tossing billows of adversity, are also the great secret of scientific acquirement and discovery. It was in this alone that the meek-spirited Newton felt and confessed his superiority to common men. It was this unpretending virtue that gave energy and success to his unrivalled mathematical sagacity, and that combined the gigantic powers of his reason and invention with a laborious and unrivalled minuteness of observation and experiment. This virtue may be sometimes the offspring of an enthusiastic love of knowledge; but it is then most perfect and most beautiful when it grows up, side by side, and from the same root, with its twin virtue of Humility. The impatience of long-continued attention, the avidity for plausible hypothesis, the disregard for facts that militate against favorite theories, are all of them the natural fruits of proud self-confidence. It is this inflated vanity that so often induces the moral or political reasoner to rear his theory upon so slight a foundation of reality, and when it is once reared, to repose so complacently upon his fancied laurels, or to rouse himself from his flattering dreams, only to heap scorn and obloquy upon the heads of those who oppose or who doubt. On the contrary, it is the deep felt sense, the familiar and intimate conviction, that man is but darkly and imperfectly wise, whilst nature is great, and its Creator infinite, that prepare the mind for laborious study and patient inquiry—for the ready sacrifice of long-cherished notions and of fancied learning—for the prostration and subjection of the whole man to truth, and to truth alone. But from this very lowliness springs up another, and an opposite, yet not contradictory virtue. It is that of manly independence of judgment. For, the truth, once found, is acknowledged without a rival, and estimated as above all price. What is it to such a meek but sincere inquirer, that the fashion of the world is against him—that grave authority frowns upon him—that old familiar friends denounce his motives, his judgment, or his character? He has sought for a better good than they or theirs can bestow, and he has gained it. He has labored to learn that which would make him wiser and better, and others happier.—That knowledge has seized upon his intellect and his affections as with a giant's grasp. It has entered into his soul as a beam of living light. There is no place left there for the creeping things of darkness, for fear, for selfishness, for vanity, for false shame. He

knows that the fabric of his belief is firm and solid; for its roots are on the deep and low foundation of an humble, and therefore a true estimation of himself.—Founded as it is on the rock of humility, built up by patient industry, the breath of popular favor or censure passes by it unheeded, and the tempest of persecution beats on it in vain.

We must ask attention to another extract, which treats, almost too leniently, and yet with much skill, the dangerous dogma which would divest human belief of all moral character and responsibility, by teaching that it is wholly involuntary:

There is a dogma taught in some schools of metaphysics, that belief is wholly involuntary; and that as opinions must depend entirely upon the reasons presented to the mind's consideration, they can have no moral character, good or evil. If this doctrine be true, it would seem to follow, that belief and opinion must be just as independent of all moral influences in their origin and formation, as they are in their issue and character. This is a dogma that has passed from the books and schools of philosophy to the forum and the senate, furnished argument for the grave review and the popular harangue, and has served as the foundation of reasoning and declamation, sometimes in the cause of sceptical indifference, and sometimes, better employed, in the service of toleration and equal laws. It contains a remarkable mixture of truth and error, and the limits of each are indicated and well defined by the purposes to which the doctrine has been applied, and by the consequences deduced from it. As applied to enforce a liberal and just tolerance of sentiment towards difference of faith or opinion, it points out correctly the numerous sources of innocent error, from some one or other of which no mind can be wholly exempt.—there are the errors of involuntary ignorance; there are those springing from ideas early instilled by education, and strengthened by youthful associations—unfounded, unexamined, it may probably be—unsuspected, but yet inwrought deeply into our dearest sympathies and best affections; there are errors from erroneous information, and facts believed on authority respectable in itself, or venerable in our eyes from gratitude or love, from custom or prejudice; errors, again, arising from the peculiar personal character of the individual, his turn of thought, his capacity for reasoning, his desires, appetites, habits, his very physical constitution, and circumstances in life.—Thus it may often happen that the mixture and association of the best sentiments and the most essential truths with baser materials, are often as real and as excusable causes of error as perfectly involuntary ignorance. Involuntary ignorance, moreover, in a being so limited as individual man, whilst the collective knowledge and the pressing duties of his species are so vast, is by no means confined to the least informed portions of society. It may be found where it is least expected, and often in company with large acquisitions in other respects. As, then, correct deductions can be drawn only from the facts and arguments actually comprehended by the mind, error may thus be pardonable, be innocent, be virtuous. In the honest language of the sternest and most uncompromising of modern controversialists, "though truth can be but on one side, sincerity may be on both." Such is the lesson of tolerance for his fellows, that the contemplation of man's weakness and fallibility ought to teach him. But a closer inspection of our own minds and hearts will show us yet other principles at work in the formation of opinion, always operating upon such opinions as are connected with the conduct and business of life, or the regulation of the heart and the desires—often affecting the speculative reason, and sometimes even the observations and conclusions of physical philosophy. The mind has a strange capacity of deceiving itself, as to what is, or is not, the just inference from the evidence within its reach. It can wilfully turn away altogether from the most important considerations, or pass them over with a slight and careless glance. It can fasten its whole or its chief attention upon some single point favorable to its own preconceived notions, to the party it has espoused, to its accidental loves, or hates, or caprices. It can deceive itself by resting implicitly upon some single strong and easily comprehended argument, on the one side; whilst it impatiently turns away from the far stronger opposing demonstration that results from a numerous and complicated, but united authority of facts and reasons. It can view things, not as they appear in the clear, colourless ray of reason, but as they show discoloured by interest, prejudice, or ridicule, according as the fashion of the world throws

upon them the many changing colors of its ever-turning prism. It can acquiesce in the first plausible conclusions that may coincide with the interests or the fancies of the individual, and resolve to think no further. It can obstinately shrink back from the painful task of unsettling early opinions, and plucking up maxims and doctrines that have been implanted early, and have entwined their roots with every fibre. The prejudiced individual may (to borrow the Baconian imagery) obstinately refuse to look forth into the broad day light, and perversely form his judgment of all things from those dim shadows that fit across the darkened cavern of his intellect, where he has erected the shrine of the idol of his secret worship, upon whose altars sometimes truth and sometimes virtue is the the sacrifice. Facts may be assumed upon authority, without investigation, because we wish them to be true, and would rather take them as such, than undergo the labor of examination, with the hazard of enduring the mortification of finding them refuted. Nay more, experience has a thousand times shown, what otherwise would seem incredible, that when the strongest and clearest evidence has been forced upon the mind, its power can be completely deadened and resisted by mere habit, or pure mental indolence. Above all, words mere words, may be taken without ever weighing their real meaning, or considering whether they have any meaning at all, and pass so current for realities, that thus a man may go through life in the loud and fervent profession of doctrines or facts, without the slightest suspicion that he is utterly ignorant of what those facts or doctrines may be—without realizing them in any actual application to nature or life, and, it may be, in the daily contradiction of his personal conduct to the words constantly upon his tongue. Thus it is, in another view of the question, that error may be very far from guiltless; that the moral faculties have much to do in the formation of opinion and the discovery of truth. From all this it follows, that the true philosophy of the laws of belief, on the one hand, bids us beware of too hasty and confident a reliance on our own judgment, and, still more, of rash scorn for the minds, or hatred for the persons, of those who range themselves under opposing banners to our own on the great questions which divide society; whilst, on the other side, it teaches us no less imperatively that we are morally accountable for the right operations of our intellect, and the proper use of the means of ascertaining truth, placed within our reach.

We had marked further passages from this finely-wrought address, but are compelled to exclude them to-day, though we would draw attention to the brief and original view taken of the influence which, in this country particularly, moral causes should exert upon the genius and works of pure literature.

A GENERAL HISTORY OF QUADRUPEDS, embellished with three hundred and forty-four engravings, from the original of T. Bewick, by A. Anderson. 1 vol.—New York: J. Booth & Son.—This purports to be the second American from the eighth London edition, and is a very attractive book for young persons, by the cuts, which are quite good, and the biographies of the animals—among which the dog figures, as he should, pre-eminently. There are a few additions of American animals, such as the Mammoth, the Grizzly Bear, &c., with authentic notices of each.

THE AMERICAN FOREST, OR UNCLE PHILIP'S CONVERSATIONS WITH THE CHILDREN ABOUT THE TREES OF AMERICA; HARPER & BROTHERS, New York: forming vol. XXII. of the Boys and Girls' Library of Useful and Entertaining Knowledge.—Uncle Philip has unquestionably the gift—rare as it is valuable—of so imparting instruction as to make the pursuit of knowledge a pleasure rather than a task.

Uncle Philip has another characteristic for which we greatly commend him, that of making his books, wherever the subject will admit of it, conduce to inspire in American children and youth a desire to be well informed in all that relates to America.

Such is the little volume now before us, which treats about the trees of America—and in the shape of beguiling conversation and amusing anecdote, imparts knowledge at once useful and ornamental.

There is not one of the books from Uncle Philip's pen that might not be introduced, with great profit to

learners, as regular school books. The style is pure and plain, the information accurate, and the spirit always devout. We could not wish any thing better to masters or scholars, than that these books should be familiar in their hands.

THE NEW ENGLAND MAGAZINE, No. XLII, FOR DECEMBER.—This is a good number of this popular Magazine; and it contains besides its usual variety, one or two papers, to which we shall take pleasure in calling the attention of our readers hereafter.

POPULAR ESSAYS ON THE LAWS OF ACOUSTICS: by Joseph Tugno, M. D. Philadelphia.—This is a small pamphlet, which treats of the anatomy and physiology of the ear, and recommends itself to persons afflicted with deafness, by adducing seventy-seven cases of the removal of that infirmity, by a mode of treatment based on the principles advanced in the treatise.

REPUBLICATION OF THE LONDON, EDINBURGH, FOREIGN AND WESTMINSTER QUARTERLY REVIEWS.—This is indeed a cheap medium of coming at the writings of the best living critics and essayists of England. The works here embodied in one publication, embrace nearly the whole field of politics and literature. We conclude to-day's review with the following extracts from the number before us: they are taken from an article in relation to the Jacobites, based upon the recently published *Memoirs of the Rebellion of 1745*; by Robert Chambers.

The species of canine fidelity which actuated many of the adherents of Charles Edward, has been admired by romance-writers; it has indeed a claim to be among the first of savage virtues,—of those virtues, which are not founded upon any kind of reasoning, but are parts of the constitution of the human animal. In other words, when human beings are totally uncivilized, the presence of such a feeling, like the instinct of a dog, serves as something on the operation of which a fellow being can calculate, or in which he can repose trust. The reflections of these people on the hardships to which Charles was personally subjected as the natural consequence of his attempt, are among the most characteristic and innocent operations of this feeling.—In their eyes he was not only suffering injustice, he was not merely deprived of that piece of property to which he had a right;—an infraction an inexplicable infraction of the laws of nature had been committed, and they were as much astonished at the slight of hand transacted before them, as the Hindoo when he sees snow, or Galileo when he found nature indulging in a vacuum, after having disallowed it for four and-thirty feet. They saw the man filthy and in rags, reclining on a bleak hill, who ought to have been glittering in diamonds and reposing on the people, as their ballads frequently expressed, and as their novelists have repeated:—

'There did our young Prince lie down,
Whose home should have been a Palace.'

It is to the same principle, tinged perhaps with a feeling of a somewhat nobler order, that is owing the fact, honorable to the constancy of the poor to their creed, that a reward for Charles's head, sufficient to have enriched a district, was never competed for.

But the adherence to divine right was not the only circumstance calculated upon in this insurrection: a dazzling perspective of Dukedoms and Marquises, made the motives of many of the adherents resemble those of their leaders. In England there existed a party of Jacobites; some of whom considered themselves of that creed by hereditary right, while others connected with the original body of patriots who harassed Walpole, finding themselves disappointed of office by Pulteney and Pelham, looked to the return of the banished family, as among other chances, one very likely to turn out in their favor.—Their chance, however, depended on the Pretender's coming, over with a tolerable force; but he came alone, and therefore they were prudently silent.*

* It is generally understood that the Stuart papers, at present in the hands of the British government, throw a strange light on the motives of the representatives of many noble houses at this period. It is disgraceful to the persons to whom they are committed, that these papers are not published; but perhaps they would exhibit in too true colors the acts of hereditary aristocracy.

Scotland was at that time in a different situation.—One part of it was cut off from the laws; and the whole country when placed in juxtaposition with England felt itself poor. The poverty of Scotland at that period has generally been accounted for the removal of the Court. To a City of lackies the removal of a court is the abstraction of the daily bread of the community; but to a country of agriculturists and manufacturers, it is a good riddance. The poverty of Scotland arose not from the removal of one great court, but from the existence of many petty ones,—especially in that part which has been noticed as beyond the pale of laws. The consequence of the existence of heritable jurisdictions, was that each man, instead of gaining his livelihood as he thought best by his own industry, got his living from his chief, and gave his obedience in return. Independently of the moral influence of this state of society, the chiefs were left to the exercise of considerable terror over their slaves.

It would appear from the collection that some of Cumberland's officers were not more accomplished in kicking than in pillaging. A lady provides an auction roll looking document, which she unceremoniously entitles 'Copy of a list of what General Hawley took from me when I lent him my house at Aberdeen.' The list is very distinct and particular in the enumeration, and design 'One set colored table china, viz ten dishes, a soup dish, and four dozen and ten plates.' The General seems to have had an eye after both the useful and the ornamental. The list proceeds to enumerate 'Many dusting cloths, for he left none. An embroidered fire-screen. A repeating clock with the stand for it, which stood by the bed in which he lay. All the books. Three flutes, and music books. Two canes with ivory heads. Two maps. A large marble mortar and pestle. A very big copper fish-kettle with a fish drainer in it. Several larding pins, and a dozen of iron skewers.' The lady so pillaged, writes an account of the circumstances to her sister. It appears from the terms used that she was an Englishwoman.

"That you my dear Mrs. Bowdler, Miss Harriott, and my brother, have been all very much astonished at not having for so long a time heard from me, (especially as I have had several kind letters from you all,) I verily believe; but what is worse, the reading of this will give you and all my friends great concern, and surprise you very much, when I shall tell you that the day before the Duke of Cumberland came here, which was the 22d of February, Colonel Watson, one of General Hawley's aid-de-camps, my neighbor Mr. Thomson, and Provost Robinson, came to me and said that the College, which was designed for the Duke, was not found convenient, and that my house and Mr. Thomson's, was what they must have. It was no difficulty for Mr. Thomson to find a place to go to, because all his and his wife's relations live here, but that was not my case; however, those gentlemen told me that when I had found a place to put myself in, all the difficulty was over, for as to every thing that was in the house, greater care would be taken of it than of any other: for I might and ought to depend on it, that as I lent my house for their convenience, they would not let me be a sufferer in any respect; that as to my china and linen I must lock it up, and put my kitchen furniture in the cellar, that it might not be in their way, and lock them, only leaving them a place for their coats, and two maids in the house to do any thing for them, and make myself quite easy, for they would not stay above two or three days here.

*** The very next morning after they came, before I was out of my bed, General Hawley sent two messengers, to command me to send him every key I had, and so I did, still thinking that when he had satisfied his curiosity, he would send them to me again; but about six o'clock in the afternoon, he sent one of his aide camps to me, (whose name is Wolf), [The editor states that he has ascertained this person to have been distinct from the officer that was afterwards the celebrated General Wolfe,] 'who after telling me rudely enough, that he had a great deal of trouble to find me out, said, that he was come to let me know, that by the Duke and General Hawley's orders, I was to be deprived of every thing I had but the clothes on my back. Do not wonder that I thought this an uncommon hard sentence, for I am very sure that I never either said or did any thing that could offend any of them, or any of the inhabitants of the place. The gentleman told me, that indeed the General had been very strict in his inquiries about me, but he could not find any thing to lay to my charge. The next day, there was a petition read to the Duke, setting forth the cruelty of this sentence, and desiring that at least I might have

my clothes belonging to myself and my child, with my provisions, with what I could make plainly appear belonged entirely to me or other people. It was said he seemed quite amazed at it, and said he would take care that I should not be robbed; and indeed the said gentleman came to me again, and said the Duke had ordered that my things should not be taken from me, so I thought I might depend on this message; but General Hawley, who lived in my house, took care to prevent that, for he packed up every bit of China I had, which I am sure would not be bought for two hundred pounds, all my bedding and table linen, every book, my repeating clock, which stood by the bed in which he lay every night, my worked screen, every rag of Mr. Gordon's clothes, the very hat, breeches, night-gown, shoes, and what shirts there was of the child's, twelve teaspoons, strainer, and tongs, the jappanned board on which the chocolate and coffee-cups stood, and put them on board a ship in the night time, directed to himself at Holyrood house at Edinburgh."

The unfortunate writer after making a further doleful enumeration continues—

"I have sent to my landlord to desire him to take his house off my hands, for it is left in such a way that it is impossible for me to go into it again, nor am I any longer in a condition to keep it. I am putting away Bob's master and Appy."

This is the same General Hawley who rendered himself celebrated for the eccentric terms of his will, which, after observing, aptly enough it would appear, "As I began the world with nothing, and as all I have is of my own acquiring, I can dispose of it as I please," terminated with these words—"In witness whereof, I have hereunto set my hand and seal, having writ it all with my own hand, and signed each page; and this I did, because I hate all priests of all professions, and I have the worst opinion of all members of the law."

As a converse to this, see what Lord George Murray, Charles's Commander in Chief, says of his army—

"As to plundering, our men were not entirely free of it; but there was much less of this than could have been expected, and few regular armies but are as guilty. To be sure there was some noted thieves amongst the Highlanders, (those called our Huzzars were not better;) what army is without them? But all possible care was taken to restrain them. How often have I gone into houses on our marches, to drive the men out of them, and drubbed them heartily. I was even reproved for correcting them. It was told me that all the Highlanders were gentlemen, and never to be beat; but I was well acquainted with their tempers. Fear was as necessary as love, to restrain the bad and keep them in order."

A considerable portion of this collection consists of accounts of the barbarities after Culloden. There is no doubt that these were dreadful. The government side has been silent on the subject; but after making allowance for the exaggeration of party, there cannot be much doubt that the numerous narratives given from different sources in this collection, are in the leading particulars too surely true. They are wearisomely disgusting, and there is scarcely a passage within a hundred pages which it is not revolting to read. Perhaps it might interest the members of the Church of England, to find the Episcopal party the subjects of proscription, and the Presbyterians zealously following Scripture in visiting the sins of the fathers upon the children until the third and fourth generation. There are scarcely grounds for ascertaining the feelings of the individual whose ambition caused so much ruin, and in the absence of proof it would be unfair to decide; but a member of his own party, Dr. King, in his anecdotes, seems to lean against him when he says—"I never heard him express any noble or benevolent sentiment, the certain indications of a great soul and good heart; or discover any sorrow or compassion for the misfortune of so many worthy men who had suffered in his cause."

After these bloody details, a string of accounts of the "Prince's Wanderings and Escapes" will only interest the writers of romances. Such instances as the following, are specimens of princely ingenuity, which it may do no harm to those who may be in danger of being deprived of the occupation of governing nations, to read—

"Donald MacLeod said the Prince used to smoke a great deal of tobacco: and, as in his wanderings from place to place, the pipes behaved to break, and turn into short cutties, he used to take quills, and putting one into another, 'and all,' said Donald, 'into the end of the cuttie, this served to make it long enough, and the tobacco to smoke cool.'" Donald added, that he never knew in all his life, any one better at finding out a shift than the Prince was; when

he happened to be at a pinch; and that the Prince would sometimes sing them a song to keep up their hearts."

PRESIDENT'S MESSAGE—continued from p. 761.

From the duties which devolve on the Engineer Department, and upon the Topographical Engineers, a different organization seems to be demanded by the public interest, and I recommend the subject to your consideration.

No important change has, during this season, taken place in the condition of the Indians. Arrangements are in progress for the removal of the Creeks, and will be soon for the removal of the Seminoles. I regret that the Cherokees east of the Mississippi have not yet determined, as a community, to remove. How long the personal causes which have heretofore retarded that ultimately inevitable measure, will continue to operate, I am unable to conjecture. It is certain, however, that delay will bring with it accumulated evils, which will render their condition more and more unpleasant. The experience of every year adds to the conviction, that emigration, and that alone, can preserve from destruction the remnant of the tribes yet living among us. The facility with which the necessities of life are procured, and the treaty stipulations providing aid for the emigrant Indians in their agricultural pursuits, and in the important concern of education, and their removal from those causes which have heretofore depressed all and destroyed many of the tribes, cannot fail to stimulate their exertions and reward their industry.

The two laws passed at the last session of Congress on the subject of the Indian affairs, have been carried into effect, and detailed instructions for their administration have been given. It will be seen by the estimates for the present session, that a great reduction will take place in the expenditures of the department in consequence of these laws. And there is reason to believe that their operation will be salutary, and that the colonization of the Indians on the western frontier, together with a judicious system of administration, will still further reduce the expenses of this branch of the public service, and at the same time promote its usefulness and efficiency.

Circumstances have been developed, showing the existence of extensive frauds under the various laws granting pensions and gratuities for Revolutionary services. It is impossible to estimate the amount which may have been thus fraudulently obtained from the national treasury. I am satisfied, however, it has been such as to justify a re-examination of the system, and the adoption of the necessary checks in its administration. All will agree, that the services and sufferings of the remnant of our Revolutionary band, should be fully compensated. But while this is done, every proper precaution should be taken to prevent the admission of fabricated and fraudulent claims. In the present mode of proceeding, the attestations and certificates of judicial officers of the various States, form a considerable portion of the checks which are interposed against the commission of frauds. These, however, have been, and may be, fabricated, and in such a way as to elude detection at the examining offices. And independently of this practical difficulty, it is ascertained that these documents are often loosely granted; sometimes, even bank certificates have been issued; sometimes prepared papers have been signed without inquiry; and, in one instance at least, the seal of the court has been within reach of a person most interested in its improper application.

It is obvious that, under such circumstances, no severity of administration can check the abuse of the law; and information has, from time, been communicated to the Pension Office, questioning or denying the right of persons placed upon the pension list to the bounty of the country. Such cautions are always attended to and examined. But a far more general investigation is called for; and I therefore recommend, in conformity with the suggestion of the Secretary of War, that an actual inspection should be made in each State, into the circumstances and claims of every person now drawing a pension. The honest veteran has nothing to fear from such a scrutiny, while the fraudulent claimant will be detected, and the public treasury relieved to an amount, I have reason to believe, far greater than has heretofore been suspected. The details of such a plan could be so regulated as to interpose the necessary checks, without any burthensome operation upon the pensioners. The object should be two-fold—

1. To look into the original justice of the claims, so far as this can be done under a proper system of regulations, by an examination of the claimants themselves, and by inquiring, in the vicinity of their residence, into their history, and into the opinion entertained of their revolutionary services.

2. To ascertain, in all cases, whether the original claimant is living, and this by actual personal inspection.

This measure will, if adopted, be productive, I think, of the desired results, and I therefore recommend it to your consideration, with the further suggestion, that all payments should be suspended till the necessary reports are received.

It will be seen by a tabular statement annexed to the documents transmitted to Congress, that the appropriations for objects connected with the War Department, made at the last session, for the service of the year 1834, excluding the permanent appropriations for the payment of military gratuities under the act of June 8, 1832, the appropriation of two hundred thousand dollars for arming and equipping the militia, and the appropriation of ten thousand dollars for the civilization of the Indians, which are not annually renewed, amounted to the sum of nine millions three thousand two hundred and sixty-one dollars, and that the estimates of appropriations necessary for the same branches of service for the year 1835, amount to the sum of five millions seven hundred and seventy-eight thousand nine hundred and sixty-four dollars, making a difference in the appropriations of the current year over the estimates of appropriation for the next, of three millions two hundred and twenty-four thousand two hundred and ninety-seven dollars.

The principal causes which have operated at this time to produce this great difference, are shown in the reports and documents, and in the detailed estimates. Some of these causes are accidental and temporary, while others are permanent, and aided by a just course of administration, may continue to operate beneficially upon the public expenditures.

A just economy, expending where the public service requires, and withholding where it does not, is among the indispensable duties of the Government.

I refer you to the accompanying report of the Secretary of the Navy, and to the documents with it, for a full view of the operations of that important branch of our service, during the present year. It will be seen that the wisdom and liberality with which Congress have provided for the gradual increase of our navy material, have been seconded by a corresponding zeal and fidelity on the part of those to whom has been confided the execution of the laws on the subject, and that but a short period would be now required to put in commission a force large enough for any exigency into which the country may be thrown.

When we reflect upon our position in relation to other nations, it must be apparent, that in the event of conflicts with them, we must look chiefly to our navy for the protection of our national rights.—The wide seas which separate us from other governments, must of necessity be the theatre on which an enemy will aim to assail us, and unless we are prepared to meet him on this element, we cannot be said to possess the power requisite to repel or prevent aggressions. We cannot, therefore, watch with too much attention this arm of our defence, or cherish with too much care any means by which it can possess the necessary efficiency and extension. To this end our policy has been hitherto wisely directed to the constant employment of a force sufficient to guard our commerce, and to the rapid accumulation of the materials, which are necessary to repair our vessels, and construct with ease such new ones as may be required in a state of war.

In accordance with this policy, I recommend to your consideration the erection of the additional Dry Dock described by the Secretary of the Navy, and also the construction of the Steam Batteries to which he has referred, for the purpose of testing their efficacy as auxiliaries to the system of defence now in use.

The report of the Postmaster General, herewith exhibits the condition and prospects of that Department, at the commencement of the present year, beyond its available means, of three hundred and fifteen thousand five hundred and ninety-nine dollars and ninety-eight cents, which on the first of July last, had been reduced to two hundred and sixty-eight thousand ninety-two dollars and seventy-four cents. It appears also, that the revenues for the coming year, will exceed the expenditures about two hundred and seventy thousand dollars, which, with the excess of revenue which will result from the operations of the current half year, may be expected, independent of any increase in the gross amount of postages, to supply the entire deficit before the end of 1835. But as this calculation is based on the gross amount of postages which had accrued within the period embraced by the times of striking the balances, it is obvious that without a progressive increase in the amount of postages, the existing re-

trenchments must be persevered in through the year 1836, that the Department may accumulate a surplus fund sufficient to place it in a condition of perfect ease.

It will be observed that the revenues of the Post Office Department though they have increased, and their amount is above that of any former year, have yet fallen short of the estimates more than a hundred thousand dollars. This is attributed in a great degree to the increase of the free letters growing out of the extension and abuse of the franking privilege. There has been a gradual increase in the number of executive offices to which it has been granted; and by an act passed in March, 1833, it was extended to members of Congress throughout the whole year. It is believed that a revision of the laws relative to the franking privilege, with some enactments to enforce more rigidly the restrictions under which it is granted, would operate beneficially to the country, by enabling the Department at an earlier period to restore the mail facilities that have been withdrawn, and to extend them more widely as the growing settlements of the country may require.

To a measure so important to the Government, and so just to our constituents, who ask no exclusive privileges for themselves, and are not willing to concede them to others, I earnestly recommend the serious attention of Congress.

The importance of the Post Office Department, and the magnitude to which it has grown, both in its revenues and its operations, seem to demand its re-organization by law. The whole of its receipts and disbursements have hitherto been left entirely to Executive control, and individual discretion.—The principle is as sound in relation to this as to any other Department of the Government, that as little discretion should be confided to the Executive officer who controls it, as is compatible with its efficiency. It is therefore earnestly recommended that it be organized with an Auditor and Treasurer of its own, appointed by the President and Senate, who shall be branches of the Treasury Department.

Your attention is again respectfully invited to the defect which exists in the Judicial System of the United States. Nothing can be more desirable than the uniform operations of the Federal Judiciary throughout the several States, all of which, standing on the same footing as members of the Union, have equal rights to the advantages and benefits resulting from its laws. The object is not attained by the judicial acts now in force, because they leave one fourth of the States without Circuit Courts.

It is undoubtedly the duty of Congress to place all the States on the same footing in this respect, either by the creation of an additional number of associate judges, or by an enlargement of the circuits assigned to those already appointed, so as to include the new States. Whatever may be the difficulty in a proper organization of the judicial system, so as to secure its efficiency and uniformity in all parts of the Union, and at the same time to avoid such an increase of judges as would incur the supreme appellate tribunal, it should not be allowed to weigh against the great injustice which the present operation of the system produces.

I trust that I may be also pardoned for renewing the recommendation I have so often submitted to your attention, in regard to the mode of electing the President and the Vice President of the United States. All the reflection I have been able to bestow upon the subject, increases my conviction that the best interests of the country will be promoted by the adoption of some plan which will secure, in all contingencies, that important right of sovereignty to the direct control of the People. Could this be attained, and the terms of those officers be limited to a single period of either four or six years, I think our liberties would possess an additional safeguard.

At your last session I called the attention of Congress to the destruction of the public building occupied by the Treasury Department. As the public interest requires that another building should be erected, with as little delay as possible, it is hoped that the means will be seasonably provided, and that they will be ample enough to authorize such an enlargement and improvement in the plan of the building as will more effectually accommodate the public officers, and secure the public documents deposited in it from the casualties of fire.

I have not been able to satisfy myself that the bill entitled "an Act to improve the navigation of the Wabash river," which was sent to me at the close of your last session, ought to pass, and I have therefore withheld from it my approval, and now return it to the Senate, the body in which it originated.

There can be no question connected with the administration of public affairs, more important or more difficult to be satisfactorily dealt with, than that which relates to the

rightful authority and proper action of the Federal Government upon the subject of Internal Improvements. To inherent embarrassments have been added others resulting from the course of our legislation concerning it.

I have heretofore communicated freely with Congress upon this subject, and in advertising to it again, I cannot refrain from expressing my increased conviction of its extreme importance, as well in regard to its bearing upon the maintenance of the Constitution and the prudent management of the public revenue, as on account of its disturbing effect upon the harmony of the Union.

We are in no danger from violations of the Constitution by which encroachments are made upon the personal rights of the citizens. The sentence of condemnation long since pronounced by the American People upon acts of that character, will, I doubt not, continue to prove as salutary in its effects as it is irreversible in its nature. But against the danger of unconstitutional acts, which, instead of menacing the vengeance of offended authority, proffer local advantages, and bring in their train to the patronage of the Government, we are, I fear, not so safe. To suppose that because our Government has been instituted for the benefit of the People, it must therefore have the power to do whatever may seem to conduce to the public good, is an error, into which honest minds are too apt to fall. In yielding themselves to this fallacy, they overlook the great considerations on which the Federal Constitution was founded. They forget that in consequence of the conceded diversities in the interests and condition of the different States, it was foreseen, at the period of its adoption, that although a particular measure of the Government might be beneficial and proper in one State, it might be the reverse in another—that it was for this reason the States would not consent to make a grant to the Federal Government of the general and usual powers of Government, but of such only as were specifically enumerated, and the probable effects of which they could, as they thought, safely anticipate; and they forgot also the paramount obligation upon all to abide by the compact, then so solemnly, and, it was hoped, so firmly established. In addition to the dangers to the constitution springing from the sources I have stated, there has been one which was perhaps greater than all. I allude to the materials which this subject has afforded for sinister appeals to selfish feelings, and the opinion heretofore so extensively entertained of its adaptation to the purposes of personal ambition. With such stimulants it is not surprising that the acts and pretensions of the Federal Government in this behalf should sometimes have been carried to an alarming extent. The questions which have arisen upon this subject have related—

1st. To the power of making internal improvements within the limits of a State, with the right of territorial jurisdiction, sufficient at least for their preservation and use;

2d. To the right of appropriating money in aid of such works when carried on by a State, or by a company in virtue of State authority, surrendering the claim of jurisdiction; and

3d. To the propriety of appropriations for improvements of a particular class, viz. for light-houses, beacons, buoys, public piers, and for the removal of sand bars, sawyers, and other temporary and partial impediments in our navigable rivers and harbors.

The claims of power for the General Government upon each of these points certainly present matter of the deepest interest. The first is however of much the greatest importance, inasmuch as, in addition to the dangers of unequal and improvident expenditures of public moneys, common to all, there is superadded to that the conflicting jurisdictions of the respective governments. Federal jurisdiction, at least to the extent I have stated, has been justly regarded by its advocates as necessarily appurtenant to the power in question, if that exists by the constitution. That the most injurious conflicts would unavoidably arise between the respective jurisdictions of the state and federal governments, in the absence of a constitutional provision marking out their respective boundaries cannot be doubted. The local advantages to be obtained would induce the state to overlook in the beginning the dangers and difficulties to which they might ultimately be exposed. The powers exercised by the federal government would soon be regarded with jealousy by the state authorities, and originating as they must from implication or assumption, it would be impossible to affix to them certain and safe limits. Opportunities and temptations to the assumption of power incompatible with state sovereignty would be increased, and those barriers which resist the tendency of our system towards consolidation greatly weakened. The officers and agents of the general government might not always have the discretion to abstain from intermeddling with state concerns; and if they did they would not always escape the suspicion of having done so. Collisions, and consequent irritations would spring up,—that harmony which should ever exist between the general government and each member of the confederacy, would be frequently inter-

rupted—a spirit of contention would be engendered—and the dangers of division greatly multiplied.

Yet we all know that notwithstanding these grave objections, this dangerous doctrine was at one time apparently proceeding to its final establishment with fearful rapidity. The desire to embark the federal government in works of internal improvement, prevailed in the highest degree, during the first session of the first congress that I had the honor to meet in my present situation. When the bill authorising a subscription on the part of the United States for stock in the Maysville and Lexington Turnpike Companies, passed the two Houses, there had been reported, by the committees of Internal Improvement, bills containing appropriations for such objects, exclusive of those for the Cumberland road, and for harbors and light houses, to the amount of about one hundred and six millions of dollars. In this amount was included authority to the Secretary of the Treasury to subscribe for the stock of different companies to a great extent, and the residue was principally for the direct construction of roads by this government. In addition to these projects, which had been presented to the two Houses, under the sanction and recommendation of their respective committees on Internal Improvement, there were then still pending before the committees, and in memorials to Congress, presented, but not referred, different projects for works of a similar character, the expense of which cannot be estimated with certainty, but must have exceeded one hundred millions of dollars.

Regarding the bill authorising a subscription to the stock of the Maysville and Lexington Turnpike Company, as the entering wedge of a system which, however weak at first might soon become strong enough to rive the bands of the Union asunder, and believing that if its passage was acquiesced in by the Executive and the People, there would no longer be any limitation upon the authority of the General Government in respect to the appropriation of money for such objects, I deemed it an imperative duty to withhold from it the Executive approval. Although, from the obviously local character of that work, I might well have contented myself with a refusal to approve the bill upon that ground, yet, sensible of the vital importance of the subject, and anxious that my views and opinions in regard to the whole matter, should be fully understood by Congress, and my constituents, I felt it my duty to go further. I therefore embraced that early occasion to apprise Congress, that, in my opinion, the Constitution did not confer upon it the power to authorise the construction of ordinary roads and canals within the limits of a State, and to say, respectfully, that no bill admitting such a power could receive my official sanction. I did so in the confident expectation that the speedy settlement of the public mind upon the whole subject would be greatly facilitated by the difference between the two Houses and myself, and that the harmonious action of the several departments of the Federal Government in regard to it, would be ultimately secured.

So far as it regards this branch of the subject, my best hopes have been realized. Nearly four years have elapsed, and several sessions of Congress have intervened, and no attempt, within my recollection, has been made to induce Congress to exercise this power. The applications for the construction of roads and canals, which were formerly multiplied upon your files, are no longer presented; and we have good reason to infer that the current of public sentiment has become so decided against the pretension as effectually to discourage its re-assertion. So thinking, I derive the greatest satisfaction from the conviction, that thus much at least has been secured upon this important and embarrassing subject.

From attempts to appropriate the national funds to objects which are confessedly of a local character, we cannot, I trust, have anything further to apprehend. My views in regard to the expediency of making appropriations for works which are claimed to be of a national character, and prosecuted under State authority, assuming that Congress have the right to do so, were stated in my annual message to Congress in 1830, and also in that containing my objections to the Maysville Road Bill.

So thoroughly convinced am I, that no such appropriations ought to be made by Congress, until a suitable constitutional provision is made upon the subject, and so essential do I regard the point to the highest interests of the country, that I could not consider myself as discharging my duty to my constituents in giving the Executive sanction to any bill containing such an appropriation. If the people of the United States desire that the public Treasury shall be resorted to for the means to prosecute such works, they will concur in an amendment of the Constitution, prescribing a rule by which the national character of the works is to be tested, and by which the greatest

practical equality of benefits may be secured to each member of the confederacy. The effects of such a regulation would be most salutary in preventing unprofitable expenditure, in securing our legislation from the pernicious consequences of a scramble for the favors of Government, and in repressing the spirit of discontent which must inevitably arise from an unequal distribution of treasures which belong alike to all.

There is another class of appropriations for what may be called, without impropriety, internal improvements, which have always been regarded as standing upon different grounds from those to which I have referred. I allude to such as have for their object the improvement of our harbors, the removal of partial and temporary obstructions in our navigable rivers, for the facility and security of our foreign commerce. The grounds upon which I distinguish appropriations of this character from others have already been stated to Congress. I will now only add that at the first session of Congress under the new Constitution, it was provided by law, that all expenses which should accrue from and after the 15th day of August, 1789, in the necessary support and maintenance and repairs of all light houses, beacons, buoys, and public piers, erected, placed, or sunk before the passage of the act, within any bay, inlet, harbor, or port of the United States, for rendering the navigation thereof easy and safe, should be defrayed out of the Treasury of the United States; and further, that it should be the duty of the Secretary of the Treasury to provide by contracts, with the approbation of the President, for rebuilding when necessary and keeping in good repair the light houses, beacons, buoys, and public piers, in the several States, and for furnishing them with supplies. Appropriations for similar objects have been continued from that time to the present without interruption or dispute.

As a natural consequence of the increase and extension of our foreign commerce, ports of entry and delivery have been multiplied and established, not only upon our seaboard, but in the interior of the country, upon our lakes and navigable rivers. The convenience and safety of this commerce have led to the gradual extension of these expenditures; to the erection of lighthouses, the placing, planting, and sinking of buoys, beacons, and piers, and to the removal of partial and temporary obstructions in our navigable rivers, and in the harbors upon our great lakes, as well as on the seaboard. Although I have expressed to Congress my apprehension that these expenditures have sometimes been extravagant and disproportionate to the advantages to be derived from them, I have not felt it to be my duty to refuse my assent to bills containing them, and have contented myself to follow in this respect in the footsteps of all my predecessors. Sensible, however, from experience and observation, of the great abuses to which the unrestricted exercise of this authority by Congress was exposed, I have prescribed a limitation for the government of my own conduct, by which expenditures of this character are confined to places below the ports of entry and delivery established by law. I am very sensible that this restriction is not as satisfactory as could be desired, and that much embarrassment may be caused to the Executive Department in its execution, by appropriations for remote and not well understood objects. But as neither my own reflections, nor the lights which I may properly derive from other sources, have supplied me with a better, I shall continue to apply my best exertions to a faithful application of the rule upon which it is founded. I sincerely regret that I could not give my assent to the bill entitled "An act to improve the navigation of the Wabash river," but I could not have done so without receding from the ground which I have, upon the fullest consideration, taken upon this subject, and of which Congress has been heretofore apprized, and without throwing the subject again open to abuse, which no good citizen, entertaining my opinions, could desire.

I rely upon the intelligence and candor of my fellow-citizens, in whose liberal indulgence I have already so largely participated for a correct appreciation of my motives in interposing, as I have done, on this and other occasions checks to a course of legislation which, without in the slightest degree calling in question the motives of others, I consider as sanctioning improper and unconstitutional expenditures of public treasure.

I am not hostile to internal improvements, and wish to see them extended to every part of the country. But I am fully persuaded, if they are not commenced in proper manner, confined to proper objects, and conducted under an authority generally conceded to be rightful, that a successful prosecution of them cannot be reasonably expected. The attempt will meet with resistance where it might otherwise receive support, and instead of strengthening the bonds of our confederacy, it will only multiply and aggravate the cause of disunion.

ANDREW JACKSON.

December 1, 1834.

FOREIGN VARIETIES.

Metternich's System of Government.—The *Augsburg Gazette* contains the following reflections, occasioned by the 25th Anniversary of Prince Metternich's elevation to the high office of Prime Minister of Austria:

"The Prince assumed the direction of the foreign relations of the vast Austrian empire a few days after the battle of Wagram, when the political opinions of Europe were in a state of total disorganization. On the 7th of October, three months later, the Prince was officially appointed to the same Department, for which he had shown himself singularly qualified. At this time the power of Napoleon was at its height, and he wished to form an alliance with the nation which he had made so many attempts to weaken. Napoleon was crowned with power and glory; his power extended from the Vistula to Cadiz—from the German Ocean to the extremity of Calabria. That formidable empire seemed then daily to become more consolidated, and promised ages of domination to him and his posterity. Europe beheld with astonishment his rapid conquests, and the magic extension of his power. A few profound observers, and amongst the number was Prince Metternich, discovered the secret of the weakness of the French.

"Gradually, circumstances, unforeseen by the mass of mankind, brought about the overthrow of that gigantic empire. The legions which had penetrated to the Nile, and had marched in triumph from the Tagus to Russia, at last succumbed under the load of victories. Then Sovereigns and nations united in the most sacred bonds of brotherhood against the unprecedented favorite of fortune. The battle of Leipzig relieved Germany from the yoke which had pressed so heavily upon her. Her injured sons avenged the thousand wrongs she had received at the hands of the licentious French soldiery, and the capital of their late oppressors lay exposed to a deservedly terrible retribution.

"The Bourbons were restored to the throne of their ancestors, and, in an assembly of Sovereigns and statesmen, the most memorable in the history of the world, the affairs of Europe were brought back to their natural state. The nations were a second time thrown into alarm, and a second time they restored peace to the world. The man who had been the cause of so much bloodshed, so much misery, was consigned to a barren rock of the Atlantic, there to end his days, the prisoner of the nation which he most detested. The powers Europe were then left in peace to turn their attention towards their people.

"Spain became a prey to civil war, in changing a long-established system of government for one which she did not understand, and she found herself obliged to return to the former state of things. The attempt at innovation of to-day will have the same end, for the moral state of Spain will not allow of such ameliorations.

"Portugal founded an empire in the New World, and she herself is now the victim of revolutionary measures. France, after a repose of fifteen years, was hurried into the course which formerly proved so disastrous to herself and Europe. The day of the popular triumph was the day of her ruin; the illusions have vanished, and she is now fast retreating. Italy attempted to follow the example of France, but happily for herself she did not succeed in bringing about her own destruction.

"Turkey, distracted by foreign and domestic feuds, has lost many of her fairest provinces. Her hitherto natural enemy has now become her friend, and will remain such. The interests of Russia are now closely allied to those of the Porte. The Emperor Alexander died covered with glory, deplored by his people, and esteemed and regretted by Europe. Constantine abdicated the throne in favor of his younger brother Nicholas, who trod the Hydra of revolution under his feet, and has lately succeeded in restoring peace to Poland.

"In this short space of time England has had her Castlereagh, Canning, Liverpool, and Grey. Each successive administration has been hesitating between the aristocracy and democracy; but the door of the revolution has at last been opened.

"In 1810 Austria found her herself in a most critical position. Since the taking of Paris, until the present hour, she has followed the same political system. Her power and influence have changed, it is true; but neither reproach nor praise has been able to induce her to abandon her principles.

"The country is happy in the enjoyment of the greatest plenty—the necessities of life are cheap—and the people love their Emperor. The arts and sciences flourish, and commerce is in a flourishing

state all over the empire; the credit of the Government is good; and order and tranquility reign everywhere.

"Austria has always shown herself the implacable enemy of reckless innovations. The device on her standard is 'Undoubted Right,' and every one will rally round it in case of need.

"This undeviating policy of 25 years is a rare political phenomenon. History will mention it in terms of the highest praise, and the name of Metternich will ever be associated with the persevering character of his system."

Firemen of Paris.—It is almost superfluous to state that there is in Paris, and indeed, in every town of France, a corps of firemen, who are denominated *sapeurs-pompiers*. The men composing it are in general, carpenters. Their full dress consists of a military blue coat, with red epaulettes, blue trousers, gaiters, and a brass helmet, surmounted by bear skin, and ornamented with a scarlet plume. When off guard the helmet is changed for a cocked hat. Besides being similarly trained, they are armed like the soldiers of the line, with the musket, bayonet, and *briquet* (a short cut-and-thrust sword.) On summons to a fire the gorgeous helmet is put off, and replaced by a plain but serviceable brass casque, which guards the head against falling bricks, tiles or pieces of timber. The military coat is doffed, and a tight smart waistcoat with sleeves, substituted for it. If the fire be not of an extensive or very menacing character, three men only are told off from those on duty, and fly to the scene of action.—One of them bears an axe, a second a coil of rope, with hooks attached to it, the third a ladder. Of their knowledge, dexterity, activity and courage on arriving at the place where summoned, I shall not here stop to speak in the terms of eulogy, which on every occasion they merit, because the attempt would necessarily involve the discussion of the question whether or not their military habits do not conduce to their efficiency. At present I shall only add that every theatre, spectacle, and institution in Paris is day and night watched and guarded by one or more firemen, the number of them being always in proportion to the extent of the building or the hazard to which it is exposed. Besides the ordinary guard of firemen at every theatre in Paris, a reinforcement arrives an hour before the doors are opened, which is withdrawn an hour, I believe; after the termination of the performances. The well grounded sense of security with which the Parisian audiences regard the most flaming incidents on the stage is hence easily accounted for, and it is indeed well worth the cost it occasions. It is impossible to pass down the Rue de la Paix, at five o'clock on any day without being struck with admiration at the order, yet business like demeanour of the various detachments of firemen that at that hour issue from their barracks in that street, and proceed to their respective posts at the theatres. Even the houses of private individuals who give entertainments are placed for the moment under the safeguard of the nearest body or detachment of *sapeurs-pompiers*. In the Palaces, Houses of Legislature, and indeed every great building belonging to the State, including the residences or hotels of the Ministers, firemen are ever present. Every man who has been in Paris is capable of dilating on the advantages that obviously result from the maintenance of such a conservative body as that of which I speak—the *sapeurs-pompiers*. Its superiority in every thing (except perhaps the personal courage and devotion of the individuals) over the firemen of London requires not to those who have seen both to be demonstrated. The comparative absence of such a calamity as a fired dwelling house or other building in Paris is due, not so much to the solidity of the walls of the houses, as to the intelligence, sagacity, training, discipline, *sang froid*, and activity of the *sapeurs-pompiers*.—[Letter from Paris in the Morning Herald.]

Antiquities of Upper Peru.—In his very interesting *viva voce* communications to the meeting at Edinburgh, Mr. Pentland stated, that all about the lake Titicaca he had discovered innumerable tombs, hundreds of which he had entered and examined. The monuments were of a grand species of design and architecture, resembling Cyclopean remains and not unworthy of the arts of ancient Rome or Greece.—They therefore, betokened a high degree of civilization; but the most extraordinary fact belonging to them was their invariably containing the mortal remains of a race of men of all ages, from the earliest infancy to maturity and old age, the formation of whose *crania* seemed to prove that they were an extinct race of natives, who had inhabited Upper Peru above a thousand years ago; and diff-

ering from any mortals now inhabiting our globe.—The site is between 14 deg. and 19 deg. of north latitude, and the skulls found (of which specimens are both in London and Paris) are remarkable for their extreme extent behind the occipital foramen, inasmuch that it could hardly be believed their owners could move in a perpendicular position.—For, two-thirds of the weight of the cerebral mass must have been deposited in this wonderfully elongated cerebellum; and as the bones of the face were also much elongated, the general appearance must have been rather that of some of the ape family than of human beings. In the tombs, as in those of Egypt parcels of grain were left inside the dead; and it was another singular circumstance, that the maize or Indian corn, so left, was different from any that now existed in the country. Mr. Pentland entered into details to show that the extraordinary forms thus brought to the light of day from their long sojourn could not be attributed to pressure, or any external force, similar to that still employed by many American tribes; and adduced, in confirmation of this view, the opinions of Cuvier, of Gall, and of many other celebrated naturalists and anatomists.—On these grounds he was of opinion, that they constituted the population of these elevated regions before the arrival of the present Indian population, which, in its physical characters, its customs, &c., offered many analogies with the Asiatic races of the old world.

Singapore.—About ten P. M. on the 26th we anchored in Singapore-roads; and upon the following day I landed and took up my residence, with my friend Mr. Bowstead. The island of Singapore, at the part on which the settlement has been formed, has a very picturesque appearance, when seen from the ships at anchor in the roads, and does not prove less attractive to the stranger on landing; the government hill, with its neat bungalow and flag-staff, forms a prominent feature in the view; and the undulating character of the land, with the thickly timbered country in the distance, imparts a pleasing variety. Who can regard this settlement, so very recently established, yet now become a place of importance by the enterprise of British merchants, (almost unaided by any assistance from government,) without feeling how just the conclusion is, that commerce can elevate the most barren and unproductive spot to a place of high importance? Look at the magnificent private mansions, warehouses, and the extent of commerce, showing the present and increasing wealth of this rising settlement. The town is erected on the banks of a salt-water creek, more commonly named the Singapore river; one side contains the warehouses, stores, offices, &c. of the merchants, as well as the native streets, bazaars, &c.—Opposite to it is an extensive plain, adorned by several elegant mansions; and beyond the Kampong Glam, Malay town, with the residence of the sultan of Johore and his followers; from him the island was purchased by the British Government, for which he still receives the annual pension which had been stipulated at the time. Close to the creek, which has received the more dignified application of the "Singapore river," wharfs extend from and opposite to the warehouses of the merchants. The two most extensive and splendid buildings are those recently erected by Messrs Armstrong and Gemmil. The Commercial square, contains some very good buildings, used as offices, shops, and residences; the most conspicuous of which, for elegance, is the building used as offices and warehouses by the firm of Messrs. Rawson, Houldsworth, and Co. The river, at the lowest part of the settlement, always presents an animated scene, from the arrival and departure of native boats, with fruit, vegetables, and live stock, as well as from the number of sampans plying for hire, or attending upon the commanders of vessels, who employ them, in this sultry climate, in preference to exposing their crews to a tropical sun; many native boats lie waiting or delivering cargoes of the various productions of the fertile islands in the vicinity. At night, the flickering and brilliant lights from the numerous boats upon the river make an animated appearance.—[Bennett's Wanderings.]

Structure of Feathers.—Sir David Brewster communicated to the British Association a verbal account, which he illustrated by figures, of some curious results, which he had obtained respecting the structure of feathers. Dr. Paley and Dr. Roget had, as he mentioned, explained, generally, the beautiful mechanism, by which nature enables the tender fabric of the vane of the feather to resist the action of the air, and to repair itself when divided. By the use of very fine microscopes of garnet and sapphire, Sir David succeeded in developing the mi-

nute structures by which the preceding mechanism operates; and he particularly described a singular spring, consisting of a number of slender fibres laid together, all of which resisted the division of the feather or the separation of its fibrils, and which again closed themselves together when their separation had been forcibly effected. He described the difference between down and feather, the former being intended either for ornament or warmth, and the latter for resisting the action of the air when a continued fabric was necessary. These observations were made chiefly on the large feathers from the wing of the vulture; but, generally speaking, the structure is the same in other feathers, though with various modifications. The curious property preserved by the fibrils of hooking themselves together when they had been separated, was mentioned as a singular provision of nature, though the author felt some difficulty in giving a perfectly satisfactory explanation of the manner in which it was effected.

Free Negro Labor.—According to a calculation which is considered to be correctly made, the island of Jamaica exported in 1823, with 342,382 slaves, 1,417,758 quintals of sugar, which was a year of great fertility in the West Indies; and Puerto Rico, with 45,000 slaves, at the highest calculation, produced 414,663 quintals; therefore Jamaica, with a number of slaves, nearly nine times greater, yielded only 3 1-2 times more sugar, which clearly shows that free labor in Puerto Rico contributes largely to produce even sugar. To the number of free laborers only can this difference be attributed, for it must be acknowledged that although the soil of Jamaica is not so fertile as that of Puerto Rico, yet the cultivation of the cane is better understood. In the same year, the three British islands of Barbadoes, St. Vincent's, and Grenada, which, with the exception of Jamaica, produce most sugar of all the British Antilles, with the labor of 128,000 slaves, yielded 784,567 quintals of sugar; that is to say, that with more than three times the number of slaves, they produced less than double the quantity of sugar raised in one year in Puerto Rico. The same year, the whole of the British West India colonies, with 627,000 slaves, yielded only 3,005,366 quintals of Sugar; which proves that with 15 1-2 times more slaves, they only produced 7 1-2 times more sugar than Puerto Rico. In 1821, 428,962 quintals of sugar, 20,758 quintals, 96 lbs. of coffee, and 1320 quintals of cotton were produced in the island of Guadalupe, by the labor of 87,998 slaves; while Puerto Rico, with about half the number of slaves, moderately worked, and humanely treated, produced, besides the quantity of sugar already stated, 25,000 quintals of coffee, 34,163 quintals of tobacco, and 9,166 quintals of cotton, together with cattle, pepper, rice, and many minor productions. This simple enumeration of facts is sufficient to establish the advantages arising from, and the extent of, free labor in Puerto Rico. —[Flinter's Account of Puerto Rico.]

Indian Method of Catching Fish.—By means of a plant the Indians have a sweeping method of catching fish, which we for the information of pond and river poachers in this country may give. "The Hairy (with which the Indians intoxicate fish) is a plant of the papilionacea order, bearing a small quantity of bluish blossoms, which produces pods about two inches long, less in the leaf than a goose quill, and enclosing about ten small gray leaves; leaf nine inches long, central stem with four spearpointed leaflets on each side, two inches long and one at the apex; root, when full grown, three inches in diameter, containing a gummy, milky juice, which is a powerful narcotic, and prepared by the Indians for fishing, by beating with sticks until reduced to a mass like coarse hemp; the hairy root is then employed to saturate a corial (canoe) full of water until it is of a milky whiteness, then conveyed to the selected fishing spot, and the water sprinkled with the infusion (a solid cubic foot of the root will poison an acre of water surface); in about twenty minutes every fish within its influence rises to the surface, and is either taken by the hand or shot with arrows, neither deteriorated in quality nor tainted more rapidly than when hooked." —[Martin's History of the British Colonies.]

Never Squabble with a Wit.—Dr. Marmaduke Coghill, the Chancellor of the Irish Exchequer, in a letter dated 1st April, (an ominous day.) 1736, ob- serve to the Honorable Edward Southwell—"I see Sir Thomas Frontenac has got nothing by his resentment against Dean Swift; and, indeed, I never knew any man a gainer by being provoked at a wit, for the laugh is always against you, and the only re- turn from a wit is fresh satire."

LONDON SERENADING IN 1703.—In a letter from Mr. William Bird to Mr. Secretary Southwell, dat- ed June, 1703, he says, "Lord Conway bid Mrs. Johnson adieu in the finest serenade I ever heard. It lasted from one to three o'clock, and brought all the ladies in Red Lion-square to their windows, and Mrs. Tempest took it ill that the compliment was not paid at her door."

Vanity.—In 1810, a notaire's clerk killed himself, leaving a piece of paper behind him, on which he de- clared, that having duly calculated and considered, he did not think it possible for him to be so great a man as Napoleon—therefore he put an end to his ex- istence,—[H. L. Bulwer's France.]

UTICA AND SCHENECTADY RAILROAD COMPANY.

Call for Second Instalment on Stock.
THE Stockholders in the Utica and Schenectady Railroad Company are requested to pay on or before the twentieth day of December next, the sum of Three Dollars on each Share of Stock in the Company held by them respectively under the penalty (provided by law in case of non-payment) of the forfeit- ure of all previous payments made thereon.

Stockholders residing in the city of New York, or within said State and south of the counties of Columbia, Greene and Delaware, are requested to make said payments to the Cashier of the Phenix Bank, at the said Bank in the city of New York; and all other Stockholders in said Company are re- quired to make said payments to the Treasurer of said Com- pany at the Albany City Bank or at the Commercial Bank, in the city of Albany; but any Stockholder residing west of the counties of Albany, Schenectady or Saratoga may make such payments by depositing the same to the credit of the said Treas- urer in the Ontario Branch Bank, in the city of Utica, or in the Herkimer County Bank, at Little Falls, or in the Montgo- mery County Bank, at Johnstown, provided a certificate of such deposits (with the name of the Stockholder by or for whom such deposits is made) be forwarded to said Treasurer, so as to be received by him on or before the 25th day of December next.

Albany, November 12, 1834. By order,
GIDEON HAWLEY,
Treasurer of the Utica and Schenectady
Railroad Company.

nov17d&Ctdcc20

LONG ISLAND RAILROAD COMPANY.

NOTICE IS HEREBY GIVEN, That the undersigned Commissioners, appointed by an act of the Legislature of the State of New-York, passed April 24, 1834, will receive sub- scriptions to the capital stock of the Long Island Railroad Company, being One Million Five Hundred Thousand Dollars, divided into shares of fifty dollars each, agreeably to the charter of said Company, on the 15th, 16th, and 17th days of Decem- ber next, from nine in the morning to three in the afternoon of each day, at the following places, viz.—At the Dry Dock Bank, No. 333 Pearl-street, in the city of New-York—at the Appren- tices' Library in the city of Brooklyn, county of Kings—at the Court House, in and for the county of Queens—at the Inn of William Griffing, in the town of River Head, county of Suffolk—at the House of Thomas Hallock, in Smithtown, in said county of Suffolk.

Subscribers are required by the Charter of the Company to pay to the Commissioners at the time of subscribing five dollars on each share.

Copies of the Charter can be had upon application at the Dry Dock Bank, 333 Pearl-street, New-York.

Samuel Hicks	Benjamin Strong
John Lorimer Graham	Joseph Moser
Edwin Hicks	Edmund Frost
Singleton Mitchell	Nicholas Wyckoff
William F. Blydenburgh	James H. Weeks
Joseph H. Goldsmith	Valentine Hicks.

13nov 1834

TOWNSEND & DUFFEE, of Palmyra, Manu- facturers of Railroad Rope, having removed their establish- ment to Hudson, under the name of *Duffee, May & Co.* offer to supply Rope of any required length (without splice) for in- clined planes of Railroads at the shortest notice, and deliver them in any of the principal cities in the United States. As to the quality of Rope, the public are referred to J. B. Jarvis, Eng. M. & H. R. Co., Albany; or James Archibald, Engineer Hudson and Delaware Canal and Railroad Company, Carbon- dale, Luzerne county, Pennsylvania.
Hudson, Columbia county, New-York,
January 29, 1835.

PATENT HAMMERED SHIP, BOAT, AND RAILROAD SPIKES.

Railroad Spikes of every description required, made at the Albany Spike Factory.

Spikes made at the above Factory are recommended to the public as superior to any thing of the kind now in use.

Ship and Boat Spikes made full size under the head, so as not to admit water.

Orders may be addressed to Messrs. ERASTUS CORNING & CO., Albany, or to THOMAS TURNER, at the Factory, Troy, N. Y. sept. 13-1 y.

NOTICE TO MANUFACTURERS.

SIMON FAIRMAN, of the village of Lansingburgh, in the county of Rensselaer, and state of New-York, has invented and put in operation a Machine for making Wrought Nails with square points. This machine will make about sixty six nails, and about forty 10d nails in a minute, and in the same proportion larger sizes, even to spikes for ships. The nail is hammered and comes from the machine completely heated to redness, that its capacity for being clenched is good and sure. One horse power is sufficient to drive one machine, and may easily be applied where such power for driving machinery is in operation. Said Fairman will make, vend and warrant ma- chines as above, to any persons who may apply for them as soon as they may be made, and on the most reasonable terms. He also desires to sell one half of his patent right for the use of said machines throughout the United States. Any person desiring further information, or to purchase, will please to call at the machine shop of Mr. John Humphrey, in the village of Lan- singburgh.—August 16, 1835. A2911 RM&F

STEPHENSON, Engineer, and Builder of a superior style of Passenger Cars for Railroad No. 264 Elizabethstreet, near Blacker street, New-York.

RAILROAD COMPANIES would do well to examine these Cars; a specimen of which may be seen on that part of the New-York and Harlem Railroad, now in operation. J 15 tr

RAILROAD CAR WHEELS AND BOXES, AND OTHER RAILROAD CASTINGS.

Also, AXLES furnished and fitted to wheels complete at the Jefferson Cotton and Wool Machine Factory and Foundry, Paterson, N. J. All orders addressed to the subscribers at Paterson, or 60 Wall street, New-York, will be promptly at- tended to. Also, CAR SPRINGS.
Also, Flange Tires turned complete.

J8 ROGERS, KETCHUM & GROSVENOR.

NOVELTY WORKS,
Near Dry Dock, New-York.

THOMAS B. STILLMAN, Manufacturer of Steam Engines, Boilers, Railroad and Mill Work, Lathes, Presses, and other Machinery. Also, Dr. Nott's Patent Tubular Boil- ers, which are warranted, for safety and economy, to be supe- rior to any thing of the kind heretofore used. The fullest assurance is given that work shall be done well, and on rea- sonable terms. A share of public patronage is respectfully solicited. m19



INSTRUMENTS, SURVEYING AND NAUTICAL INSTRUMENT MANUFACTORY.

EWING & HEARTT, at the sign of the Quadrant, No. 53 South street, one door north of the Union Hotel, Bal- timore, beg leave to inform their friends and the public, espe- cially Engineers, that they continue to manufacture to order and keep for sale every description of Instruments in the above branches, which they can furnish at the shortest notice, and on fair terms. Instruments repaired [with care and promptitude.

For proof of the high estimation on which their Surveying Instruments are held, they respectfully beg leave to tender to the public perusal, the following certificates from gentlemen of distinguished scientific attainments.

To Ewing & Heartt.—Agreeably to your request made some months since, I now offer you my opinion of the Instruments made at your establishment, for the Baltimore and Ohio Rail- road Company. This opinion would have been given at a much earlier period, but was intentionally delayed, in order to afford a longer time for the trial of the Instruments, so that I could speak with the greater confidence of their merits, if such they should be found to possess.

It is with much pleasure I can now state that notwithstanding the Instruments in the service procured from our northern ci- ties are considered good, I have a decided preference for those manufactured by you. Of the whole number manufactured for the Department of Construction, to wit: five Levels, and five of the Compasses, not one has required any repairs within the last twelve months, except from the occasional imperfection of a screw, or from accidents, to which all Instruments are liable.

They possess a firmness and stability, and at the same time a neatness and beauty of execution, which reflect much credit on the artists engaged in their construction.

I can with confidence recommend them as being worthy the notice of Companies engaged in Internal Improvements, who may require Instruments of superior workmanship.

JAMES P. STABLER,
Superintendent of Construction of the Baltimore and Ohio Railroad.

I have examined with care several Engineers' Instruments of your Manufacture, particularly Spirit Levels, and Survey- or's Compasses; and take pleasure in expressing my opinion of the excellence of the workmanship. The parts of the levels appeared well proportioned to secure facility in use, and accu- racy and permanency in adjustments.

These instruments seemed to me to possess all the modern improvement of construction, of which so many have been made within these few years; and I have no doubt but they will give every satisfaction when used in the field.

WILLIAM HOWARD, U. S. Civil Engineer.

Baltimore, May 1st, 1835.
To Messrs Ewing and Heartt.—As you have asked me to give my opinion of the merits of those Instruments of your manu- facture which I have either used or examined, I cheerfully state that as far as my opportunities of my becoming acquainted with their qualities have gone, I have great reason to think well of the skill displayed in their construction. The neatness of their workmanship has been the subject of frequent remark by my self, and of the accuracy of their performance I have received satisfactory assurance from others, whose opinion I respect, and who have had them for a considerable time in use. The efforts you have made since your establishment in this city, to relieve us of the necessity of sending elsewhere for what we may want in our line, deserve the unqualified approbation and our warm encouragement. Wishing you all the success which your enterprise so well merits, I remain, yours, &c.

B. H. LATROBE,
Civil Engineer in the service of the Baltimore and Ohio Rail- road Company.

A number of other letters are in our possession and might be introduced, but are too lengthy. We should be happy to submit them, upon application, to any person desirous of perus- ing the same.

The frequent riots and outrages committed by the laborers on the Baltimore and Washington Railroad have induced the people residing in its vicinity to call a public meeting, to adopt measures to prevent a repetition of them. At this meeting a preamble and resolutions were adopted, which breathe a true American spirit.

It is time that the thousands who flee from beggary and want at home, to this country of peace and plenty, where they enjoy privileges in common with the native citizen, should be taught the necessity of obedience to the laws—and respect for the life and property of all. They must be taught that their having been slaves and paupers at home does not give them the right to murder our citizens, and take possession of their property, on their arrival here; that, although ours is a country which affords an asylum for the oppressed of all nations, NATIVE citizens are not yet prepared to yield every thing to those whom they have often, by their liberal charity, saved from suffering and even starvation. Let AMERICANS everywhere adopt a similar course towards those who show a disposition to trample on their inalienable rights and privileges; whilst to those who appreciate and respect our institutions, we would offer the enjoyment of every civil privilege secured by the most perfect constitution that was ever framed by man.

Washington Railroad Outrages.—At a large and respectable meeting of inhabitants of Anne Arundel and Prince Georges counties adjacent to the Baltimore and Washington Railroad, and held at Merrill's tavern on the 26th inst. Col. George Cooke being called to the chair, and George L. Stockett, Esq. appointed Secretary. The following preamble and resolutions were unanimously adopted:

Whereas, a portion of Ann Arundel and Prince George counties, bordering on the Baltimore and Washington Railroad, has been the scene of successive riots, dangers and bloodshed since the commencement of said work down to the present time, and whereas, the recent scene of murders of the most wanton, diabolical and atrocious character upon respectable and unoffending citizens, scarcely paralleled in the annals of our history has given ample cause to our fellow citizens for alarm and apprehensions for the safety of our lives; and whereas, while they suffer themselves to remain exposed to the deep laid schemes of that population from which all these grievances emanate,

And whereas, it is known to be confined exclusively to that class of laborers which has been generally employed on the aforesaid work, and it having been established beyond all question, that the Irish laborers compose that class, and that they have formed secret associations, to which they are bound under the most awful and solemn oaths to keep each other's secrets, and under which association they are enabled to accomplish their hellish plots without being in danger of discovery. And whereas, the good citizens of these Counties have in vain set forth their grievances and remonstrances to the proper sources for the removal of the causes. And whereas, it is the right and bounden duty of our fellow citizens to defend themselves and their property against the hand of the ruffian, we the subscribers, citizens of the aforesaid Counties, do unanimously agree to adopt the following resolutions, viz:—

Resolved, That we do consider and hold the present class of Irish laborers employed on the Baltimore and Washington Railroad as a gang of ruffians and murderers, combined together under the most solemn ties to carry into effect such hellish designs as their passions or prejudices may prompt them to commit.

Resolved, That, inasmuch as by their plans of secret association, justice and the laws are deprived of their dues, it behoves our fellow citizens to adopt such measures as will tend to their quiet and safety.

Resolved, That so long as the cause of these evils remain among them, there is no security for either, and that it is indispensable that it be removed.

Resolved, That the President and Directors of the Baltimore and Ohio Railroad company, be requested to order their agents and contractors to discharge from their employ all such laborers as have been herein described.

Resolved That we will use all lawful means in our power to bring to justice, as many of the participants in the late murders, and all suspected persons as can be arrested.

Resolved, That we will unite in expelling from our counties, forcibly if we must, all such characters as have been herein described.

Resolved That the thanks of this meeting be presented to Lt. Col. Campbell and the officers and troops under his command for the prompt and efficient aid afforded by them in the arrests which have been made with the view to the conviction of the perpetrators of the murders of John Watson and William Messer.

Resolved, That the thanks of this meeting be presented to Lt. Col. Williams for his zeal and services in aiding the civil authorities to arrest and put down those rioters, as also to Major Horace Copron for the prompt and fearless manner in which he executed his orders, with so small a force, and to our fellow citizens who so promptly volunteered their services on this important occasion.

Resolved, that this meeting approve the subjoined letter of Col. George Cooke addressed to the President of the Baltimore and Ohio Railroad.

Resolved, That the proceedings of this meeting be published.

Geo. L. Stockett, Sec'y.

[Here follows the signatures.]

Anne Arundel County, Nov. 20, 1834.

PHILIP E. THOMAS, Esq. President of the Baltimore and Ohio Railroad.

Dear Sir—In consequence of the recent murders on the Washington Railroad, the inhabitants of the county adjacent to the Railroad have been kept in a continual state of alarm, no efficient measures have been adopted by the company to find out and arrest the murderers, and also from the fact that a number of our citizens have been threatened by the laborers on said road, I have been requested to state for your information that the residents of this section of the country are determined that in case the company do not adopt such measures as will in future secure them from being harassed by these frequent riots on the road, that they will muster a sufficient force and drive every Irishman off the road from the Patapsco to the big Patuxent, at all hazards, and in this determination they are promised the co-operation and aid of other sections of our county.

In making this communication I assure you the people are actuated by no other motive than to put an end to these continued murders and riots, which, if they are permitted to go unpunished as heretofore, may in the end lead to those wretches depredating still further on the surrounding neighborhood. If the ring leaders cannot be secured and punished, the whole force ought to be discharged and a new set employed.

The work had better be delayed a short time than to be the scene of such frequent and disgraceful outrages. With respect your obedient servant.

Geo. Cooke, Chairman.

More Aggressions.—The driver of the Mail stage from Washington, states, that the stable attached to Merrill's tavern at Waterloo, on the Washington road, about 13 miles from Baltimore, was burnt down last night about 12 o'clock. It is believed to have been set on fire by some of the laborers on the Railroad, who have been lurking about the premises for some days past. It is reported that a dwelling about two miles from Waterloo was also burnt, but there is no certainty of this.

TO RAILROAD COMPANIES.

The subscriber having erected extensive machinery for the manufacture of the Iron Work for Railroad Cars, and having made arrangements with Mr. Phineas Davis, patentee of the celebrated wire chilled wheels, will enable him to fit up at short notice any number of cars which may be wanted.

The superiority of the above Wheels has been fully tested on the Baltimore and Ohio Railroad, where they have been in constant use for some months past. Having fitted up Wheels for six hundred Cars, the subscriber flatters himself that he can execute orders in the above line to the satisfaction of persons requiring such work. The location of the shop being on the tide-waters of the Chesapeake Bay, will enable him to ship the work to any of the Atlantic ports, on as reasonable terms as can be offered by any person. All orders will be executed with despatch, and the work warranted. When there are but a few sets wanted, the chills and patterns are to be furnished, or the company pay the expense of making the same, and if required, will be sent with the wheels. All Wheels furnished and fitted by the subscriber will have no extra charge on account of the patent right.

Samples of the above Wheels, which have been broken to show their superiority, may be seen at the office of the Railroad Journal; at the Depot of the Boston and Providence Railroad, Boston; and at John Arnold's shop, near the Broad street House, Philadelphia. All orders directed to J. W. & E. PATTERSON, Baltimore, or to the subscriber, Joppa Mills, Little Gunpowder Post-Office, Baltimore county, Maryland, will be attended to.

DEAN WALKER, a3

LOCOMOTIVE ENGINES.

THE AMERICAN STEAM CARRIAGE COMPANY, OF PHILADELPHIA, respectfully inform the public, and especially Railroad and Transportation Companies, that they have become sole proprietors of certain improvements in the construction of Locomotive Engines, and other railway carriages, secured to Col. Stephen H. Long, of the United States Engineers, by letters patent from the United States, and that they are prepared to execute any orders for the construction of Locomotive Engines, Tenders, &c. with which they may be favored, and pledge themselves to a punctual compliance with any engagements they may make in reference to this line of business.

They have already in their possession the requisite apparatus for the construction of three classes of engines, viz. engines weighing four, five, and six tons.

The engines made by them will be warranted to travel at the following rates of speed, viz. a six ton engine at a speed of 15 miles per hour; a five ton engine at a speed of 18 miles per hour; a four ton engine at a speed of 22 1/2 miles per hour. Their performance in other respects will be warranted to equal that of the best English engines of the same class, with respect not only to their efficiency in the conveyance of burthens, but to their durability, and the cheapness and facility of their repairs.

The engines will be adapted to the use of anthracite coal, pine, wood, coke, or any other fuel hitherto used in locomotive engines.

The terms shall be quite as favorable, and even more moderate, than those on which engines of the same class can be procured from abroad.

All orders for engines, &c. and other communications in reference to the subject, will be addressed to the subscriber, in the city of Philadelphia, and shall receive prompt attention.

By order of the Company,

WILLIAM NORRIS, Secretary.

December 2d, 1833.

For further information on this subject see No. 49, pag 772, Vol. 2, of Railroad Journal.

SURVEYORS' INSTRUMENTS.

Compasses of various sizes and of superior quality warranted.

Leveling Instruments, large and small sizes, with high magnifying powers with glasses made by Troughton, together with a large assortment of Engineering Instruments, manufactured and sold by E. & G. W. BLUNT, 154 Water street, corner of Maidenlane.

SURVEYING AND ENGINEERING INSTRUMENTS.

The subscriber manufactures all kinds of Instruments in his profession, warranted equal, if not superior, in principles of construction and workmanship to any imported or manufactured in the United States; several of which are entirely new: among which are an Improved Compass, with a Telescope attached, by which angles can be taken with or without the use of the needle, with perfect accuracy—also, a Railroad Goniometer, with two Telescopes—and a Levelling Instrument, with a Goniometer attached, particularly adapted to Railroad purposes.

WM. J. YOUNG,

Mathematical Instrument Maker, No. 9 Dock street, Philadelphia.

The following recommendations are respectfully submitted to Engineers, Surveyors, and others interested.

Baltimore, 1833.

In reply to thy inquiries respecting the instruments manufactured by thee, now in use on the Baltimore and Ohio Railroad. I cheerfully furnish thee with the following information. The whole number of Levels now in possession of the department of construction of thy make is seven. The whole number of the "Improved Compass" is eight. These are all exclusive of the number in the service of the Engineer and Graduation Department.

Both Levels and Compasses are in good repair. They have in fact needed but little repairs, except from accidents to which all instruments of the kind are liable.

I have found that thy patterns for the levels and compasses have been preferred by my assistants generally, to any others in use, and the Improved Compass is superior to any other description of Goniometer that we have yet tried in laying the rails on this Road.

This instrument, more recently improved with a reversing telescope, in place of the vane sights, leaves the engineer scarcely anything to desire in the formation or convenience of the Compass. It is indeed the most completely adapted to later angles of any simple and cheap instrument that I have yet seen, and I cannot but believe it will be preferred to all others now in use for laying off rails—and in fact, when known, I think it will be as highly appreciated for common surveying.

Respectfully thy friend,

JAMES P. STABLER, Superintendent of Construction of Baltimore and Ohio Railroad.

Philadelphia, February, 1833.

Having for the last two years made constant use of Mr. Young's "Patent Improved Compass," I can safely say I believe it to be much superior to any other instrument of the kind, now in use, and as such most cheerfully recommend it to Engineers and Surveyors.

E. H. GILL, Civil Engineer.

Germantown, February, 1833.

For a year past I have used Instruments made by Mr. W. J. Young, of Philadelphia, in which he has combined the properties of a Theodolite with the common Level.

I consider these Instruments admirably calculated for laying out Railroads, and can recommend them to the notice of Engineers as preferable to any others for that purpose.

HENRY R. CAMPBELL, Eng. Philad.

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